

4 Park Plan





4 Park Plan

This General Plan establishes a long-range purpose and vision for CPSRA. Specific management zones described in the plan clarify the management intent and desired visitor experiences at the various proposed facilities at CPSRA. The goals and guidelines in this General Plan provide guidance on how to achieve the purpose, vision, and management intent for CPSRA. The goals and guidelines were developed to address known planning issues while providing a foundation for resource protection, development, and interpretation of the park unit. The goals and guidelines also provide a framework for subsequent planning and development for the various elements of the CPSRA.

4.1 Purpose and Vision

4.1.1 Declaration of Purpose

The statement of purpose contained in a general plan is a unique statement of direction that is specific to the State Park it is intended to guide. The statement of purpose for CPSRA is as follows:

The primary purpose of the Candlestick Point State Recreation Area is to make available to the people the recreational opportunities, whether passive or active, that are offered by the shoreline and adjacent bay waters.

4.1.2 Park Vision

The park vision describes the future desired outcome of CPSRA, expressing what the park represents and its role as a state park. The vision for CPSRA is as follows:

The vision of Candlestick Point SRA, California's first urban state park, is to bring state park values and mission into an urban setting. Visitors from the local community, state of California and farther afield will enjoy a range of opportunities to participate in recreational activities and experience nature along the San Francisco Bay. Sweeping views of the Bay, native coastal landscapes, tidal marshes, beaches, and areas for community gathering and activity will all contribute to the character of CPSRA. The park will encourage active, healthy lifestyles while at the same time serving as a respite from the urban surroundings of San Francisco and the larger Bay Area. Recreation programs and facilities will maximize access to the Bay and be developed in concert with CPSRA's natural surroundings, treading lightly on the land. CPSRA will enhance the public's understanding of the Bay – its natural history, stories of settlement and development, and future challenges related to sea level rise. The park will foster community and encourage stewardship, and in doing so, become a destination along the Bay for visitors both near and far.

4.2 Unit Classification

Park management and direction is also guided by the park unit's classification. In April 1977, CPSRA was classified by the California State Park and Recreation Commission as a State Recreation Area, because it is capable of withstanding extensive human impact. Additionally, it is close to large centers of population and major routes of travel; it has proven recreational resources; and it can be developed and operated to provide many outdoor recreational and interpretive opportunities in San Francisco Bay, its surroundings, and the Bay ecosystem (State Parks 1988).

The following is the classification definition for a State Recreation Area unit according to public resources code (updated in 1994):

PRC Section 5019.56: State recreation units consist of areas selected, developed, and operated to provide outdoor recreational opportunities. The units shall be designated by the commission by naming, in accordance with Article 1 (commencing with Section 5001) and this article relating to classification.

In the planning of improvements to be undertaken within state recreation units, consideration shall be given to compatibility of design with the surrounding scenic and environmental characteristics.

State recreation units may be established in the terrestrial or nonmarine aquatic (lake or stream) environments of the state and shall be further classified as one of the following types:

- (a) State recreation areas, consisting of areas selected and developed to provide multiple recreational opportunities to meet other than purely local needs. The areas shall be selected for their having terrain capable of withstanding extensive human impact and for their proximity to large population centers, major routes of travel, or proven recreational resources such as manmade or natural bodies of water. Areas containing ecological, geological, scenic, or cultural resources of significant value shall be preserved within state wildernesses, state reserves, state parks, or natural or cultural preserves, or, for those areas situated seaward of the mean high tide line, shall be designated state marine reserves, state marine parks, state marine conservation areas, or state marine cultural preservation areas.

Improvements may be undertaken to provide for recreational activities, including, but not limited to, camping, picnicking, swimming, hiking, bicycling, horseback riding, boating, waterskiing, diving, winter sports, fishing, and hunting.

Improvements to provide for urban or indoor formalized recreational activities shall not be undertaken within state recreation areas.

Once the Yosemite Slough Restoration Project is completed, State Parks should consider classifying the restored habitat as a natural preserve. The following is the classification definition for a Natural Preserve according to the public resources code:

PRC Section 5019.71: Natural Preserves consist of distinct nonmarine areas of outstanding natural or scientific significance established within the boundaries of other state park system units. The purpose of natural preserves shall be to preserve such features as rare or endangered plant and animal species and their supporting ecosystems, representative examples of plant or animal communities existing in California prior to the impact of civilization, geological features illustrative of geologic processes, significant fossil occurrences or geological features of cultural or economic interest, or topographic features illustrative of representative or unique biogeographical patterns. Areas set aside as natural preserves shall be of sufficient size to allow, where possible, the natural dynamics of ecological interaction to continue without interference, and to provide in all cases, a practicable management unit. Habitat manipulation shall be permitted only in those areas found by scientific analysis to require

manipulation to preserve the species or associations that constitute the basis for the establishment of the natural preserve.

4.3 Planning Zones

This section describes the planning zones within CPSRA. Each of the park's geographic areas (e.g., Heart of the Park, Candlestick Meadows) will likely have a combination of different programs and facilities related to recreation, natural and cultural resources, interpretation, and education. Because management activities will likely be most similar within specific landscape types (e.g., tidal marsh, grassland/coastal shrub), these form the basis for the designation of CPSRA's planning zones. The Draft General Plan Preferred Alternative (Figure 4-1) illustrates each of these planning zones.

4.3.1 Tidal Marsh Zone

The Tidal Marsh Zone should be managed to maximize ecological processes and opportunities for education. This zone contains several ecotones, which occur at different elevation zones, receive different degrees of tidal inundation, and support different plant communities. Each of these ecotones represents different vegetation types, primarily geared towards creating habitat for wildlife, with some opportunities for low-impact recreation, interpretation, and education. The Tidal Marsh Zone contains a total of approximately 12 acres in areas of Yosemite Slough, the South Basin Shoreline, the Heart of the Park, and The Point.

4.3.2 Grassland/Coastal Shrub Zone

The Grassland/Coastal Shrub Zone should be managed for upland habitat and low-impact, nature-based recreation. This zone is characterized by tall, perennial grasses with a mix of coastal scrub species, such as coyote brush and California sagebrush, which provide valuable habitat for small mammals and reptiles. Occasional groupings of small wind-tolerant trees, rocks, and woodpiles provide additional habitat value, but are not dominant. The Grassland/Coastal Shrub Zone is aesthetically pleasing, creating a wild, informal, and open character. Recreational uses would include seating areas, trails, viewing, and special events at the nature theater. The Grassland/Coastal Shrub Zone contains a Habitat Focus Area in the Candlestick Meadows, the largest area within this zone. The Habitat Focus Area promotes habitat value as the primary goal for this area of grassland/scrub to provide enhanced breeding, refuge, or feeding habitat, as well as opportunities for low-impact, nature-based recreation, interpretation, and education. The Grassland/Coastal Shrub Zone contains a total of approximately 40 acres in areas of Yosemite Slough, the South Basin Shoreline, and Candlestick Meadows.

CANDLESTICK POINT STATE RECREATION AREA



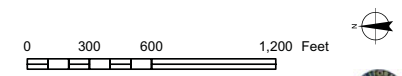
Figure 4-1
**GENERAL PLAN
PREFERRED ALTERNATIVE**

PLANNING ZONES

- tidal marsh zone
- grassland / coastal shrub zone
- coastal native zone
- active recreation zone
- community garden / plant nursery
- beach shoreline zone
- administration / maintenance zone
- planning area boundary

FEATURES

- visitor facility area
- coastal shoreline treatment
- bay trail
- muni bus rapid transit stop



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4.3.3 Coastal Native Zone

The Coastal Native Zone should be managed to create a transition between CPSRA and the adjacent neighborhood. This zone is an ornamental landscape primarily composed of native groundcovers, grasses, shrubs, and trees. The Coastal Native Zone serves aesthetic purposes, provides a buffer to the development, and allows opportunities for passive recreation, such as strolling and relaxing on paths and small paved seating and picnic areas. This zone would have some habitat value due to its inclusion of native species and a higher percentage of trees. The Coastal Native Zone contains a total of approximately 40 acres in areas of the South Basin Shoreline, Candlestick Meadows, the Heart of the Park, The Point, The Neck, and the Last Port.

4.3.4 Active Recreation Zone

The Active Recreation Zone should be managed for high levels of recreational activity and visitor use. This zone consists of grassy areas that promote a range of recreation activities. The Active Recreation Zone consists of two vegetation types—Active Lawn and Meadow Lawn—illustrated by the Draft Concept Master Plan presented in Appendix C. Active Lawn consists primarily of durable turf that is irrigated and manicured for high recreational use, such as picnicking, frisbee, and other play activities. Active Lawn also includes paths, paved picnicking areas, and other facilities suitable for more intense use areas. Meadow Lawn consists of native, scrubby grasses that can be mowed to be more inviting for informal recreational use. This landscape type would be non-irrigated and appear more natural than the typical urban lawn. The entire Active Recreation Zone would integrate trees, shrubs, and groundcovers from the coastal native landscape palette to soften buildings, provide shade, define spaces, and serve as ornamental design elements. The Active Recreation Zone contains a total of approximately 25 acres in the eastern portion of Yosemite Slough, the western portion of Candlestick Meadows, and throughout the Heart of the Park.

4.3.5 Community Garden/Plant Nursery Zone

The Community Garden/Plant Nursery Zone should be managed to facilitate programs related to gardening, horticultural demonstrations, native plant propagation, and ecological restoration. This zone includes the existing Community Garden and native plant nursery at CPSRA. Additional components of this landscape type may include new and expanded facilities and programs for agricultural education, food preparation, “farm-to-table” operations, and native plant propagation. The Community Garden/Plant Nursery Zone contains a total of approximately one acre in the southwestern portion of Yosemite Slough.

4.3.6 Beach Shoreline Zone

The Beach Shoreline Zone should be managed as a series of shoreline destinations that facilitate a range of visitor experiences. This zone is characterized by a sandy shoreline and access to the Bay for recreation. The scale of the Beach Shoreline Zone may range from the large, active Jackrabbit Beach in the Heart of the Park to the smaller, more respite-oriented beach at Candlestick Cove. This zone may include enhanced and expanded beaches to maximize opportunities for recreation. The Beach Shoreline Zone contains a total of approximately five acres in the Heart of the Park, The Point, The Neck, and the Last Port.

4.3.7 Administration/Maintenance Zone

The Administration/Maintenance Zone should be managed as a center of operations for CPSRA staff and volunteers. This zone includes CPSRA's existing administration and maintenance facilities, located adjacent to the Community Garden. The focus of the Administration/Maintenance Zone is on providing maintenance and administration facilities to serve the future operational needs of CPSRA. This zone may include new and enhanced facilities for park operations, maintenance, storage, and staff parking. The Administration/Maintenance Zone contains a total of approximately two acres in the western portion of Yosemite Slough.

4.4 Land Use Management

CPSRA includes seven distinct geographic areas, within which a mix of activities and facilities will occur. The Draft General Plan Preferred Alternative (Figure 4-1) illustrates the major features of each of these geographic areas. The Draft Concept Master Plan included in Appendix C presents one example of how these areas may be improved.

4.4.1 Yosemite Slough

This area consists of the portion of CPSRA surrounding Yosemite Slough, including the Community Garden/Plant Nursery and Administration/Maintenance zones. The Yosemite Slough Restoration Project stems from CPSRA's first General Plan. Construction of Phase I (north of the slough), began in 2011, and detailed design of Phase II (south of the slough) will occur in the future. Uses are primarily oriented around the creation of tidal marsh and upland habitats, low-impact recreation, (e.g., wildlife viewing, picnicking), and educational and interpretive activities related to the restoration project. Facilities in the Yosemite Slough area will include the existing Community Garden and native plant nursery, maintenance/administration facilities, and adjacent staff parking area; new facilities may include an information kiosk, iconic art, an interpretive area in an upland area on the north side of Yosemite Slough that could

include an enclosed structure or an outdoor pavilion, family gathering areas, public parking areas, and extension of the Bay Trail. Design of this area would include a key pedestrian access point to link Yosemite Slough with the nearby Alice Griffith housing development.



Yosemite Slough

4.4.2 South Basin Shoreline

The South Basin Shoreline extends easterly from Yosemite Slough along the Bay. This area would function as a “linear park” that provides access to the Bay shoreline buffering CPSRA from adjacent neighborhood development planned under the Candlestick Point-Hunters Point Shipyard Phase II Project. New programs and facilities in the South Basin Shoreline area would improve a portion of the area currently used as parking for San Francisco 49ers home games. Low-impact recreation (e.g., trail use, wildlife viewing, picnicking) and nature-based education and interpretation would be the predominant uses in this area. New facilities may include extension of the Bay Trail, paved and natural surface trails, a pedestrian access beneath the bridge, interpretive signage/art, family gathering areas, an overlook, an outdoor classroom and interpretive

facilities, and a new fishing and viewing pier. The South Basin Shoreline may also accommodate overland flow of stormwater in an area that may function as a raingarden during the wet season.



South Basin Shoreline

4.4.3 Candlestick Meadows

As with the adjacent South Basin Shoreline, the Candlestick Meadows area would transform an area of CPSRA that is largely unimproved. The northwesterly portion of Candlestick Meadows would interface with the large wedge park planned for the adjacent neighborhood and a BRT stop, creating an area of major activity. A variety of paved and natural-surface trails would create multiple access points, opportunities for a wide range of uses, and access to the Bay shoreline.

Facilities in the western portion of Candlestick Meadows, adjacent to the neighboring community, may include a lawn for active play, family and group gathering areas, an information kiosk for visitors, a restroom, seasonal raingardens that treat stormwater and provide educational opportunities, and a public parking area. The remaining portion

of Candlestick Meadows focuses on creating and enhancing grass/scrub habitat for birds and small mammals. This area would also include low-impact recreational use, and additional facilities may include natural-surface trails, smaller family gathering areas, landforms for wind protection and spatial definition, a nature theater for small community events, and a restroom.



Candlestick Meadows

4.4.4 Heart of the Park

The Heart of the Park is the primary recreational hub of CPSRA, building upon the existing facilities and visitor use concentrated around Jackrabbit Beach and the nearby lawn areas. The focus of the Heart of the Park is improved access to the Bay and water-oriented recreational opportunities. New facilities may include a non-motorized boat launch, ADA-accessible viewing pier, boatbuilding center with educational boating programs, bike and boat rentals, concession stands, beach enhancements, additional family and group gathering areas, and landforms that provide shelter from the wind. An information kiosk and interpretive signage/art may also provide a sense of entry into the Heart of the Park, where CPSRA and the small wedge park planned for the adjacent

neighborhood meet. Parking in appropriate locations, such as adjacent to boating facilities and gathering areas, would maximize recreational opportunities and may also provide locations for street food and other vendors.



Heart of the Park

4.4.5 The Point

The Point would provide enhanced access to the Bay, preserving the area's current character as a quieter area of the park. New facilities would improve opportunities to enjoy the sweeping Bay views and may include a new viewing area, boat-landing beach, bike or boat-in campsites that may also serve as day-use areas, family gathering areas, interpretive signage/art, and landforms to provide shelter from the wind. The existing pier would continue to provide fishing, sightseeing and birdwatching opportunities and views of the Bay.



The Point

4.4.6 The Neck

The Neck connects the Heart of the Park to the Last Port along CPSRA's southern edge. The additional land resulting from the land exchange would widen this area, creating opportunities for additional visitor use and facilities. This area would focus on expanding active recreational opportunities and access to the Bay by improving the existing windsurfer staging and launching facilities, fitness circuit, and beach at Hermit's Cove. The existing pier at The Neck may also be relocated slightly to the west and re-constructed as a partial groyne to facilitate the accretion of sand and expansion of the beach at Hermit's Cove, and an information kiosk may be constructed in the park near the intersection of Harney Way and Arelious Walker Drive. Habitat terraces may also be created behind the beach at Hermit's Cove to reduce the grade change and facilitate easy access to the beach, and parking adjacent to Harney Way would ensure access to The Neck. The Neck may also accommodate overland flow of stormwater.

4.4.7 Last Port

The Last Port serves as the southern gateway to CPSRA. Plans for improvement would build upon the existing uses and facilities in the area, which include picnicking, trails, and beaches. New facilities may include iconic art that marks the entrance to the park, an interpretive plaza overlooking the Bay, a small lawn for picnicking and active play, family gathering areas, and enhancements to the beach at Candlestick Cove. A parking area along the northern edge of the Last Port would provide access to this area, similar to the current configuration.



Last Port



4.5 Other Management Considerations

Planning and implementation of improvements at CPSRA must consider the effects of the redevelopment of the surrounding neighborhood and of sea level rise. These effects may require specific planning and design approaches, as described below.

4.5.1 Urban Integration

The Candlestick Point-Hunters Point Shipyard Phase II Project planned adjacent to CPSRA intends to elevate the grade of the development to withstand sea level rise of 36 inches. Much of CPSRA will likely remain at its current elevation, creating considerable grade changes near the Heart of the Park and between the park and the adjacent neighborhood. Grading may be required at specific locations along the park's urban edge to provide a seamless transition between CPSRA and the adjacent neighborhood and maximize access to the Bay. Grading may include areas of cut, fill, terracing and other treatments to create this transition.

4.5.2 Sea Level Rise

As a bayside park, CPSRA must consider the future effects of sea level rise. Where considered necessary to preserve park facilities, natural resources, and opportunities for visitor use, engineered solutions to sea level may be appropriate. This may include adding fill to increase the elevation of the park in certain locations, the construction of barriers (e.g., berms, levees), and/or grading at the shoreline edge. In other locations, the response may be to retreat and allow rising seas to overflow the shoreline or other low-lying portions of the SRA. This would change the landscape of the park and may in turn result in additional improvements. For example, sea level rise that inundates the area between the Heart of the Park from The Point may create an island and lead to subsequent construction of a bridge to continue visitor access. Addressing sea level rise at CPSRA may involve adaptive management, whereby State Parks determines an appropriate response, monitors its performance, and determines the need for any modifications or other next steps. Additional technical studies would be needed to understand how sea level rise will affect different areas of the park's shoreline. An adaptive management plan to address sea level rise was developed for the north side of Yosemite Slough as part of the Yosemite Slough Restoration Project, and it is expected that a similar adaptive management strategy will be developed for the south side of the slough (see Appendix E). State Parks will continue to work with the California State Parks Foundation during detailed design and planning to address sea level rise within CPSRA.

4.5.3 Grading

Improvements at CPSRA may include grading, in addition to that associated with integrating the park into the surrounding urban environment and adapting to sea level rise. The creation of tidal marsh along the South Basin Shoreline may involve cut and fill in areas in order to create the elevations necessary to support different vegetation communities. In addition, grading may occur along some areas of the shoreline to improve visitor access to the Bay. The creation of landforms to provide wind protection

and add spatial definition would also require earthmoving and grading. The extent of grading to be conducted will be determined during more detailed design phases of CPSRA.

4.5.4 Parking

Parking will be an important consideration at CPSRA. Visitors to the park can arrive by many transportation modes: walking from the adjoining neighborhoods, biking along the Bay Trail or a city bike route, riding public transit, or driving a car. Adequate parking is important to ensure access for a wide range of users, including visitors from other areas of the region or state and people with disabilities. In addition, specific recreational activities, such as windsurfing, non-motorized boating, and some group activities require vehicles to transport equipment and will require parking adjacent to the activity. CPSRA would provide at least the same amount of parking as under existing conditions, with the potential for additional parking.

As stated in Section 3.2.2, Access and Linkages, the planned Candlestick Point-Hunters Point Shipyard Phase II Project will provide parking, including a large garage for the regional retail area near the Last Port area and residential parking at a ratio of one space per unit. However, residential parking will be sold or leased separately from individual residential units (San Francisco Redevelopment Agency and San Francisco Planning Department, 2009). It is possible that future residents may forego purchasing or leasing off-street parking and use street parking instead, which will increase demand for parking in the neighborhood, including parking at CPSRA. Determination of CPSRA's parking capacity will need to consider the parking and alternative transportation upgrades planned for the surrounding redevelopment as well as the expected increase in parking demand in the neighborhood.

State Parks staff should work with the City and County of San Francisco to address parking issues and to ensure that adequate parking is available for CPSRA visitors. Possible parking management options include the following:

- Utilize an adaptive management approach, starting with low parking fees (e.g., \$1/hour up to \$6/day) during park hours and monitor any parking impacts from non-park users. If it is determined the non-park users are negatively affecting parking capacity, adjust fees or implement other options outlined below.
- Set the parking fees at CPSRA to be commensurate with the cost of metered parking and parking garage fees outside of the park. By ensuring that parking at CPSRA would cost the same as parking outside of the park, there would be no incentive for non-park users (e.g., local residents and employees of nearby

businesses) to park at CPSRA. The impact to park users would be costly parking rates.

- Install pay machines inside the park and require visitors to CPSRA to enter the park to pay for parking. This would require visitors to walk into the park (beyond the parking area) to pay for parking, which would be inconvenient if they were not planning to visit the park. This would discourage non-park users from parking at CPSRA. Parking fees could be reduced below metered parking and garage fees with this option.

4.6 Parkwide Goals and Guidelines

Park unit goals and guidelines apply to the entire CPSRA property; they have been developed to address issues, needs, and opportunities for improvement, protection, or change. Goals and guidelines provide guidance for management of CPSRA to achieve its long term vision. Goals establish the purpose and define the desired future conditions, while guidelines provide directions that State Parks will consider to achieve the goals.

The parkwide goals and guidelines presented in this section are organized into the following categories:

- **Visitor Experience**, including Visitor Facilities and Visitor Management
- **Recreation**, including Trails/Routes and Aesthetic Resources
- **Natural Resources**, including Vegetation, Wildlife, Shoreline Management and Water Quality, Hazards and Hazardous Materials, and Geology
- **Community and Cultural Resources**, including Community Programs and Facilities, Community Health, and Cultural Resources
- **Interpretation and Education**
- **Operations**, including Staffing, Facilities and Maintenance, Neighborhood Integration, Access, Multi-Modal Transportation and Parking, Universal Access, Visitor Safety, Park Branding, Agreements and Concessions, and Energy, Water and Waste

Zone-specific guidelines are presented in Section 4.7 for the planning zones described Section 4.3.

As stated in Chapter 2, Existing Conditions, the City and County of San Francisco's HDMT is a comprehensive tool created by the San Francisco Department of Public Health to evaluate the effects of urban development plans and projects on public health. The HDMT, which is included in Appendix B, includes a list of policies and design strategies that can serve as recommendations to improve a proposed plan or project

(SFDPH 2009a). Many of the policies and design strategies identified in the HDMT are incorporated into the CPSRA goals and guidelines presented below. Goals and guidelines that incorporate HDMT information are designated with an asterisk (*).

4.6.1 Visitor Experience

CPSRA offers a wide range of experiences and recreational activities to visitors from nearby communities and throughout California.

Visitor Facilities

CPSRA is classified as a state recreation area and is intended to provide multiple outdoor recreational opportunities to the public. Visitor facilities support recreation by allowing the public to enjoy and benefit from the many resources and recreational opportunities provided by CPSRA. State Parks and concession-offered visitor services contribute to quality recreation opportunities for a wide range of visitors with respect to age, race, income, education, and physical ability. The following goals and guidelines are intended to enhance existing visitor facilities and to guide the development and implementation of new facilities within CPSRA.

Goal Visitor Facilities-1

Provide visitor facilities within the park as needed to facilitate the public's enjoyment of the natural setting and resources.

- **Guideline Visitor Facilities-1:** When planning for new visitor facilities, evaluate services provided by local entities, including existing and planned facilities in the Bayview Hunters Point neighborhood and surrounding region, to provide complementary facilities and programs.
- **Guideline Visitor Facilities-2:** Locate visitor facilities that are larger and/or provide more active recreational opportunities in areas that have convenient access and are suitable for higher intensities of use.
- **Guideline Visitor Facilities-3:** Concentrate group-sized gathering areas, park features and programs that tend to generate higher noise levels near each other, to provide a balance between areas of intense use and areas that are more quiet and conducive to nature-based activities.
- **Guideline Visitor Facilities-4:** Ensure that site facilities and spaces designed for more intense recreational use in areas of lesser habitat value.
- **Guideline Visitor Facilities-5:** Ensure that visitor facilities such as restrooms, water fountains, benches, picnic tables, and parking spaces are provided in convenient locations throughout the park.

- **Guideline Visitor Facilities-6:** Provide visitor facilities such as parking, restrooms, potable water, and staging areas that support aquatic recreation uses.
- **Guideline Visitor Facilities-7:** Ensure that visitor facilities and associated services reflect a balance between the need for resource protection, recreation, and interpretation and education.
- **Guideline Visitor Facilities-8:** Use vegetation, landforms or other design strategies to provide and enhance a variety of microclimates, offering the visitor a choice of protection or exposure to sun, shade, wind or rain.
- **Guideline Visitor Facilities-9:** Ensure that roads, parking and trails are clearly delineated to park visitors while not detracting from the visual aesthetics of the park. This will allow visitors to navigate easily and quickly through the park and will improve visitor experiences.

Goal Visitor Facilities-2

Expand opportunities for recreation that focus on San Francisco Bay and are consistent with the park unit classification of a State Recreation Area.

- **Guideline Visitor Facilities-10:** Enhance opportunities for the recreational use of Bay waters by kayakers, windsurfers, and other human-powered watercraft by providing safe and convenient Bay access facilities. Enhance windsurfing facilities in their current location to facilitate easier access to the Bay. Focus non-motorized boating in the Heart of the Park by creating a boat launch, boat rentals, and a boat-building center. Provide a new boat landing beach and boat-in camping at the Point.
- **Guideline Visitor Facilities-11:** Site facilities to avoid adverse affects on sensitive shoreline habitat and features. The character of access accommodations (e.g., ramps, steps, gravel/sand beach, etc.) and their design should be responsive to the site specific setting and the nature of the projected use. Design facilities to minimize dependence on extensive maintenance and repair operations.
- **Guideline Visitor Facilities-12:** Enhance existing beaches to expand recreational opportunities. Expand Jackrabbit Beach, and create a destination for more intensive recreation. Emphasize opportunities for solitude or quieter recreation at the beaches at Hermit's Cove and Candlestick Cove.
- **Guideline Visitor Facilities-13:** Maintain the existing pier at The Point, and provide additional fishing and viewing piers. Reconstruct the pier in The Neck to serve as a breakwater that shelters the beach at Hermit's Cove and provides access for persons with mobility challenges.
- **Guideline Visitor Facilities-14:** Use landforms and/or wind shelters to improve visitor experience and expand opportunities for recreation by the Bay.
- **Guideline Visitor Facilities-15:** Provide a nature theater for small-scale community events that captures sweeping views of the Bay. Design the facility for multiple uses

so that it may also serve as a destination to enjoy the Bay through more passive recreational activities. If needed, implement seasonal restrictions to protect wildlife species during breeding and nesting.

- **Guideline Visitor Facilities-16:** Provide an outdoor classroom along the South Basin Shoreline to facilitate education and interpretation of CPSRA's natural history. Design the facility to minimize new construction and ongoing maintenance needs. The outdoor classroom should also serve as a gathering area or special events space when not in use for educational or interpretive activities.
- **Guideline Visitor Facilities-17:** Provide an interpretive program area / pavilion on the upland north side of Yosemite Slough to facilitate education about the Yosemite Slough Restoration Project.

Visitor Management

This General Plan assumes that the substantial population increase resulting from the planned Candlestick Point-Hunters Point Shipyard Phase II Project and other planned development projects in the neighborhood would substantially increase park visitation rates over time. Park management must anticipate increases in visitation to the park and ensure that the number of visitors does not exceed the park's ability to accommodate public use without damaging its resources.

Goal Visitor Management-1

Establish and implement an adaptive management process for managing visitor capacity at CPSRA in support of the General Plan's purpose and vision. The adaptive management process should be tailored to address visitor capacity within each planning zone at CPSRA.

- **Guideline Visitor Management-1:** Develop measurable thresholds for CPSRA that will provide a baseline for monitoring of site conditions and implementation of adaptive management, as necessary.
- **Guideline Visitor Management-2:** Conduct regular monitoring of baseline conditions to document change over time, collect and analyze visitor data, and establish visitor capacity over time, based on analysis of visitor data. Monitor conditions to ensure visitors do not degrade resources and adapt park management as necessary.
- **Guideline Visitor Management-3:** If monitoring efforts reveal that conditions are approaching or exceeding thresholds, management should consider alternatives and take appropriate action; adjust management actions to direct resource and visitor experience conditions to the desired state; and continue to implement adaptive management.

- **Guideline Visitor Management-4:** Accommodate and enhance existing recreation and visitor opportunities and monitor use levels to ensure park resources protection. Evaluate visitor programs and facilities for effectiveness, efficiency, and sustainability. Evaluate new and emerging recreation activities and trends for safety, environmental impacts, and compatibility with existing uses prior to permitting the use in the park.
- **Guideline Visitor Management-5:** Seek opportunities to further serve regional recreational demand.
- **Guideline Visitor Management-6:** Periodically evaluate how California's changing demographics may be influencing park visitation patterns and intensities and implement management actions and create opportunities that respond to these trends.

4.6.2 Recreation

CPSRA provides the potential for a wide range of recreational activities, from the more passive nature appreciation to active play, and from water-oriented to land-oriented activities. CPSRA currently offers the only access to open space along San Francisco Bay in the Bayview Hunters Point neighborhood. However, the Candlestick Point-Hunters Point Shipyard Phase II Project will create an open space network with a variety of new parks and natural spaces throughout the neighborhood. Improvements proposed in this General Plan emphasize that CPSRA is a unit of the State Parks system, whose mission is to provide for the health, inspiration, and education of the people of California by helping to preserve the State's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. Therefore, CPSRA has a much broader mission than the local urban parks in the neighborhood, which are intended to provide recreational opportunities for local residents. Recreation

Goal Recreation-1

Provide a variety of recreational opportunities that will allow visitors from neighboring communities and from throughout the region and the state to visit, appreciate, enjoy, and experience the natural, cultural, recreational and aesthetic resources of CPSRA, especially the San Francisco Bay shoreline.

- **Guideline Recreation-1:** Plan recreation opportunities and facilities within a regional context and in coordination with local agencies as well as with community organizations. Integrate recreation opportunities and facilities into recreation networks such as regional trail systems (e.g., the San Francisco Bay Trail, San Francisco Bay Area Water Trail, and the Blue Greenway). Focus on expanding the

regional diversity of visitor experiences and complementing, rather than duplicating, existing regional facilities.

- **Guideline Recreation-2:** Provide recreation opportunities that respond to the specific characteristics of the urban setting along the Bay shoreline. Include activities at the park that reveal the sights, sounds, and experiences of the Bay. Appropriate activities may include, but are not limited to, walking, jogging and fitness, biking, kayaking, beach play, windsurfing, fishing, bird watching, picnicking, informal games, nature viewing, photography, experiencing the out-of-doors, and enjoying solitude and a respite from stressful lifestyles. .
- **Guideline Recreation-3:** Evaluate new technologies and recreational activities and incorporate those that would enhance visitor experiences and benefit recreation facilities and programs. Use the Internet and/or social media for public outreach. Examine the benefits and challenges with wireless Internet access for visitors.
- **Guideline Recreation-4:** Allow dog walking within the park provided that dogs are kept on leash. Dogs are not allowed in the beach shoreline zone.

Trails/Routes

Trails and recreational routes are important facilities within and adjacent to CPSRA and are in high demand by multiple user groups. The park's relatively large urban park size provides the potential to accommodate multiple routes for pedestrians and bicyclists. The park's location along San Francisco Bay offers public access to the shoreline and connections to both land and water trails/routes within the region.

Goal Trails/Routes-1

Provide a trail/route system that offers diverse experiences to visitors with access to the Bay shoreline and regional trail systems, including the San Francisco Bay Trail, the San Francisco Bay Area Water Trail, and the Blue Greenway.

- **Guideline Trails-1:** Enhance existing trails and introduce new trails and routes that offer a range of choices for enjoying pedestrian, bicycle, aquatic, aesthetic, and interpretive experiences in the park. Focus on providing trails/routes that access areas of natural, cultural, and scenic interest, reach the Bay shoreline, and that connect to regional trail systems. Use vegetation, signage, and other design strategies to protect adjacent natural resources, where necessary.
- **Guideline Trails-2:** Create a trail/route system that includes paved, multi-use trails for more intensive recreational activity and a finer network of natural surface trails/routes that provide opportunities for nature-based recreation. Design routes to give users options of short loops and longer distances. Link paved trails to major destinations and facilities within the park. Limit some natural surface trails to

pedestrians, and use low impact construction materials and methods to protect adjacent natural habitats.

- **Guideline Trails-3:** Coordinate trail/route planning, development, and use with the City and County of San Francisco, community and open space organizations, and adjacent landowners to encourage connections between CPSRA and other open space resources, such as Bayview Hill and the recreation areas planned as part of the Candlestick Point-Hunters Point Shipyard Phase II Project.
- **Guideline Trails-4:** Support the San Francisco Bay Trail, the San Francisco Bay Area Water Trail, and the Blue Greenway by providing shoreline access and low-impact bike-in/boat-in camping within the park.

Aesthetic Resources

CPSRA is an urban state recreation area that provides respite from the surrounding built environment. The park's landscape design should be a unique expression of these contrasting influences, reflecting the intermediary nature of CPSRA between urban and Bay edges. The landscape character should create the setting for experiences that make CPSRA a favorite destination. It should enhance the inherent qualities that give the park a unique spirit of place, providing it with a clear identity within the city, and in the State Park system.

Goal Aesthetic Resources-1

Integrate the park into its surroundings by creating a design framework and using building and design materials that respond to the urban context and provide a transition to the Bay's more natural environment.

- **Guidelines Aesthetic Resources-1:** Extend the design language of the surrounding urban environment into CPSRA, using the design framework of paths, plantings and other elements.
- **Guidelines Aesthetic Resources-2:** Use a palette of materials and designs that reflects the more refined nature of the urban environment and provides a transition between adjacent urban areas and the natural areas within the park.
- **Guidelines Aesthetic Resources-3:** Coordinate with the City and County of San Francisco regarding the integration of CPSRA's design with that of adjacent city streets and parks while maintaining a unique identity for the park.
- **Guidelines Aesthetic Resources-4:** Use the coastal native zone, existing landforms, and other planning and physical strategies to create visual and sound buffers between the urban edge and the more open landscapes of the grassland/coastal shrub zone, tidal marsh zone and other more nature-focused areas of the park.

- **Guidelines Aesthetic Resources-5:** Use lighting that is directed downwards to minimize light spillage to protect dark night skies and allow for star viewing.
- **Guidelines Aesthetic Resources-6:** Use natural materials and a native-based plant palette in the tidal marsh zone, as well as in the grassland/coastal shrub and coastal native zones. Maintain landscapes in the grassland/coastal shrub and coastal native zones so that they appear natural and un-manicured.

Goal Aesthetic Resources-2

Protect and enhance scenic views of San Francisco Bay, the East Bay Hills, and San Bruno Mountain State Park that are available from the park and features such as beaches, piers and trails that contribute to CPSRA's setting, character and visitor experience.

- **Guideline Aesthetic Resources-7:** Protect, preserve and enhance positive aesthetic resources and remove or screen elements that have negative aesthetic qualities to preserve the park's scenic and recreation value. Use plantings and landscaped islands to mitigate the visual impact of parking areas, maintenance facilities, restrooms, and other structures, where appropriate.
- **Guideline Aesthetic Resources-8:** Locate development, structures, and other facilities to be sensitive to scenic views from and to the park, particularly views of San Francisco Bay. Locate facilities to minimize the impact on views from key viewpoints and to protect and/or emphasize positive scenic views. Use vegetative screening, land contouring and other appropriate methods to enhance vistas while minimizing visual impacts from structures and outdoor facilities.

4.6.3 Natural Resources

Despite its development on artificial fill, natural resources at CPSRA are abundant and an important part of the park's identity. A rare open space resource along San Francisco's eastern waterfront, CPSRA's bayside and upland habitats are valuable in an otherwise developed area. The General Plan seeks to protect and enhance the park's natural resources by adapting to the challenges associated with increased urban growth and sea level rise.

Vegetation

CPSRA currently supports a variety of vegetation types, including plants native to California and planted ornamental species. Native plant communities are especially important, as they contribute to the region's biodiversity and provide habitat for the park's wildlife species. Plant species native to the San Francisco Bay Area are uniquely suited to the region's climate and require less water and maintenance than ornamental plants.

Goal Vegetation-1

Maximize the preservation and enhancement of existing native vegetation at CPSRA.

- **Guideline Vegetation-1:** Prioritize the use of locally native species in future plantings within planning zones. "Locally native" species are those that are indigenous to the San Francisco Bay Area and occur naturally in bayside settings. Plantings of non-native species that are non-invasive and do not conflict with wildlife habitat values may be acceptable in recreation areas.
- **Guideline Vegetation-2:** Expand the existing native plant nursery to increase its capacity for propagating native plants and providing related educational programs. Where possible, use the native plant nursery to propagate and supply native plants for use in future plantings within CPSRA.
- **Guideline Vegetation-3:** Where appropriate manage existing native plant communities for long-term health. Minimize impacts to existing native plants when planning and implementing park improvements. Where possible, transplant native plantings from areas planned for improvements to other areas of CPSRA.
- **Guideline Vegetation-4:** Enhance degraded areas that are characterized by invasive weeds and ruderal vegetation.
- **Guideline Vegetation-5:** Control and/or eradicate invasive non-native species present at CPSRA such as pampas grass, French broom, iceplant, fennel, and Atlantic cordgrass. Coordinate with the Bay Area Early Detection Network (BAEDN) and use the BAEDN target weed list as a resource for regional invasive species information.

Goal Vegetation-2

Create a tidal marsh zone that reflects prehistoric shoreline conditions at CPSRA.

- **Guideline Vegetation-6:** Restore tidal wetlands in Yosemite Slough through continued implementation of the Yosemite Slough Restoration Project in partnership with the State Parks Foundation and local neighborhood organizations. Extend the tidal marsh zone along the South Basin shoreline to connect to Yosemite Slough and improve habitat for shorebirds, small mammals, and other wildlife that depend on tidal marshes. Enhance existing pockets of tidal marsh at other points along the CPSRA shoreline.
- **Guideline Vegetation-7:** Adopt an adaptive management approach for the creation and enhancement of tidal wetlands, given the uncertainties surrounding the restoration of wetlands on artificial fill and potential sea level rise.
- **Guideline Vegetation-8:** Protect and enhance existing tidal and freshwater wetlands at CPSRA. Minimize disturbance to existing wetlands, and implement any mitigation onsite, where possible.

Goal Vegetation-3

Create sustainable landscapes suitable for the climate and soil conditions of CPSRA.

- **Guideline Vegetation-9:** Emphasize plants requiring minimum maintenance (i.e., pruning and watering). Consider plant species with low water requirements, and use drought tolerant plants for landscape planting in improved areas (e.g., picnic areas, plazas, around trails and structures).
- **Guideline Vegetation-10:** Ensure that species planted in the park are not on the California Invasive Plant Council's list of invasive species.

Wildlife

CPSRA is an important resource for both common and special-status wildlife species, given the limited availability of natural habitat in the surrounding region. San Francisco Bay provides an open migratory corridor for birds to move back and forth across the Bay to more secluded, better-suited nesting and loafing sites. Balancing the protection and enhancement of wildlife habitat with park improvements and the changes planned for the surrounding neighborhood should be an important focus of natural resource management at CPSRA.

Goal Wildlife-1

Maintain, protect and/or enhance habitat for wildlife species in CPSRA.

- **Guideline Wildlife-1:** Select native trees, shrubs, and herbaceous species for future planting that provide habitat for the wildlife species that currently use CPSRA. Consider the habitat needs of raptors, shorebirds, small mammals, and other wildlife. Enhance grassland/scrub habitat in the Candlestick Meadows area for upland wildlife species.
- **Guideline Wildlife-2:** Maximize connectivity between vegetation communities, such as the grassland/coastal shrub and coastal native planning zones, to facilitate the movement of wildlife throughout the park. Provide transition zones between vegetation communities. Where possible, facilitate connections to other parks and open space areas in the region, such as Bayview Hill.
- **Guideline Wildlife-3:** Create upland vegetative buffers between trails and habitat areas, where necessary, to provide cover for wildlife and minimize disturbances from recreational activities. Plant buffers with locally native trees, shrubs, and herbaceous species. Consider limiting access by people and dogs to areas with sensitive wetland and upland habitats.

- **Guideline Wildlife-4:** Reduce and, where possible, eliminate wildlife access to human food and garbage by using wildlife-proof trash containers and dumpsters throughout the park, increasing the frequency of trash collection, and educating the public about the detrimental effects of human food on the ecological balance. Post signs throughout the park informing people not to feed wildlife and to cover and store food and trash appropriately.
- **Guideline Wildlife-5:** If necessary to protect common wildlife species, develop a program to monitor and control non-native pests. Use methods consistent with the most current version of the State Parks Operations Manual, Pest Control chapter to regulate non-native animal populations.
- **Guideline Wildlife-6:** Consider incorporating the San Francisco Planning Department's Standards for Bird-Safe Buildings¹ into any new structures that are built within the park. These standards include:
 - Use of bird-safe glazing treatments on windows of new structures so that there is no more than 10% untreated glazing within the Bird Collision Zone (the portion of buildings most likely to sustain bird strikes; this area begins at grade and extends upwards for 60 feet); and
 - Use of minimal lighting, shielding lighting, and avoiding the use of uplighting and event searchlights.

Shoreline Management and Water Quality

CPSRA's location on San Francisco Bay is one of its greatest assets, providing wildlife habitat and opportunities for visitor enjoyment. However, the park's bayside setting also brings challenges related to shoreline erosion, coastal flooding, water quality, and sea level rise. The park can do its part to minimize the risks to park staff, visitors, and facilities, but park managers should also plan to adapt to changing conditions in the natural environment.

An adaptive management plan to address sea level rise was developed for the north side of Yosemite Slough as part of the Yosemite Slough Restoration Project, and it is expected that a similar adaptive management strategy will be developed for the south side of the slough. State Parks will continue to work with the California State Parks Foundation during detailed design and planning to address sea level rise within CPSRA.

¹ Standards for Bird-Safe Buildings, San Francisco Planning Department, adopted July 14, 2011. Available at: http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf.

Shoreline Management

Goal Shoreline-1

Implement appropriate shoreline management measures, with preference for soft and natural shoreline restoration measures versus armoring where possible, to improve long-term stability and enhance shoreline appearance.

- **Guideline Shoreline-1:** Use natural, soft shoreline protection where needed to protect critical infrastructure and water quality.
- **Guideline Shoreline-2:** Employ “soft” shoreline enhancement strategies (e.g., tidal wetland creation, beach enhancement, re-grading) where appropriate, to re-establish more natural shoreline contours and enhance habitat values. Evaluate site-specific factors, such as hydrodynamics, soil conditions, and land use and resource management objectives, to determine the suitability of such strategies.
- **Guideline Shoreline-3:** Explore the possibility of creating a living shoreline, consistent with the California State Coastal Conservancy’s San Francisco Bay Living Shoreline Project. When planning shoreline enhancements (e.g., tidal wetland creation), consider a combined habitat approach that would make an integrated design connection between subtidal habitat restoration and adjacent tidal and riparian areas for the benefit of multiple species, including aquatic invertebrates, fish, ducks, and shorebirds.
- **Guideline Shoreline-4:** Consider structural reinforcements, such as engineered rock revetment or vertical seawalls, only in areas subject to severe erosion to protect critically needed infrastructure. Analyze potential negative effects of proposed structural reinforcements to surrounding shoreline areas. Incorporate structures that enhance recreation opportunities and aesthetics, where feasible.
- **Guideline Shoreline-5:** Adopt an adaptive management approach for shoreline improvement projects. Monitor and maintain projects to determine their effectiveness, and respond by implementing adjustments, as necessary.
- **Guideline Shoreline-6:** Design and construct all proposed shoreline enhancements (e.g., tidal wetland creation, beach enhancement, etc.) and facilities (e.g., piers, boat launches, etc.) only after conducting site-specific environmental analysis of factors such as local sea level rise, hydrology, soil suitability, storm surge impact, visual resources, cultural resources, subsurface toxics, water quality, and wetland habitat.
- **Guideline Shoreline-7:** Integrate shoreline protection measures with other park priorities, such as access and circulation, recreation, and economics.

Goal Shoreline-2

Adapt to sea level rise to reduce impacts to CPSRA visitors, staff, facilities and resources while maximizing opportunities for visitor enjoyment.

- **Guideline Shoreline-8:** Minimize the construction of new park facilities in areas susceptible to coastal flooding, using FEMA maps of the 100-year floodplain as a guide. Consider higher projections for sea level rise, increased storm surge, and greater coastal flooding when planning park improvements, and site facilities to minimize risk.
- **Guideline Shoreline-9:** Develop and adopt an adaptive management plan with the City and County of San Francisco to address the threat of sea level rise at CPSRA and especially around Yosemite Slough. Consider a range of alternatives to protect park facilities, visitor safety, and natural resources, such as re-grading, adding fill, expanding tidal wetlands, elevating facilities or retreating from the shoreline. Give priority consideration to natural adaptation where possible. Undertake pilot projects to refine the design of the most environmentally sensitive and experimental approaches. Monitor their performance to develop a responsive adaptive management plan, and consider opportunities for their implementation throughout the park.
- **Guideline Shoreline-10:** Minimize impacts to CPSRA from erosion caused by increasing sea level rise and storm surges by avoiding construction of facilities in low elevation locations, and by designing resilient features that would accommodate the projected conditions of increased sea level and storm surges and storm wave attack.
- **Guideline Shoreline-11:** Protect CPSRA from increased flooding due to sea level rise by assuring that critical infrastructure is either located above the likely inundation elevation (above 6 feet, for example) or can withstand periods of sustained inundation and wave attack. Include a minimum 20-foot-wide adaptive management zone along the shoreline, where anticipated sea level elevation and storm surges would be accommodated. Also include a 20-foot-wide adaptive management zone along the park's inland boundary in case berms or other flood control structures are needed there.

Water Quality

Goal Water Quality-1

Manage stormwater through green infrastructure.

- **Guideline Water Quality-1:** Install green infrastructure for onsite capture and treatment of stormwater runoff (e.g., seasonal raingardens, bioswales) to reduce stormwater runoff to San Francisco Bay and the amount of pollution and sedimentation in the runoff. Monitor their performance to ensure that they operate effectively, and adapt and maintain as necessary.

- **Guideline Water Quality-2:** Select appropriate vegetation so that green infrastructure elements are flexible and multi-purpose, allowing their use for other activities during the dry season.
- **Guideline Water Quality-3:** Use appropriate stormwater Best Management Practices (BMPs) for maximizing rainwater infiltration in green infrastructure elements.

Goal Water Quality-2

Pursue the continued improvement of water quality in San Francisco Bay to protect natural resources and minimize adverse impacts on water-based recreation.

- **Guideline Water Quality-4:** Establish adjacent urban storm flow outfalls that do not negatively impact the recreational values of the park by piping the flows underground to the bay. Implement storm flow BMPs to prevent erosion, minimize sediment and reduce impacts of 100 year storm flows across the park to the bay.
- **Guideline Water Quality-5:** Collaborate with the City and County of San Francisco to minimize discharges at combined sewage outfalls located in CPSRA.

Hazards and Hazardous Materials

As stated in Chapter 2, Existing Conditions, the soils at CPSRA consist entirely of fill materials, primarily obtained from dune sands, quarried rock from local hillsides, and industrial refuse. The type of fill identified in the area of CPSRA consists primarily of clays, with some sand and gravel; an area south of Yosemite Slough contains less clay and more sand, gravel and silts. A 1998 investigation that included CPSRA found its fill to contain crushed concrete, red brick, foam, plastic, ceramic tiles, copper wire, porcelain, glass, and wood fragments. The investigation also noted the presence of underground storage tanks (USTs), some of which have been removed and the associated soil remediated, and the potential for unknown USTs (SFRA and SFPD 2009).

Extensive soil sampling was conducted throughout CPSRA as part of the 1998 investigation; metals and organic compounds were detected at a wide range of locations and depths (up to 15 feet), indicating their likely association with fill materials. Contaminants detected included chromium, copper, lead, mercury, nickel, zinc PAHs, PCBs, and trace amounts of chlorinated pesticides. Groundwater sampling also detected low levels of a few organic compounds in shallow groundwater. A human health risk evaluation concluded that the presence of the detected chemicals in soil and shallow groundwater did not pose a significant carcinogenic or non-carcinogenic risk to nearby residents, workers, visitors, or recreational users of areas adjacent to the Bay.

Compounds of potential ecologic concern (metals and pesticides) were determined not to pose a significant risk to aquatic organisms (SFRA and SFPD 2009).

Any hazardous materials that may be required during construction, maintenance and operations activities at CPSRA would be handled in accordance with Chapter 0800, Hazardous Materials, of the State Parks Operations Manual (State Parks, 2001).

Goal Hazardous Materials-1

Provide for public and park employee safety and prevent exposure to hazardous materials from construction activities, residual contaminated soil or groundwater, and park maintenance and operations in accordance with Chapter 0800, Hazardous Materials, of the State Parks Operations Manual (State Parks, 2001).

- **Guideline Hazardous Materials-1:** Prepare a contingency plan to address unknown contaminants encountered during construction activities. This plan should establish and describe procedures for implementing a contingency plan, including appropriate notification and site control procedures, in the event unanticipated subsurface hazards or hazardous material releases are discovered during construction.
- **Guideline Hazardous Materials-2:** Identify lands where additional environmental investigation is needed to assess the extent of contamination with hazardous material. Conduct additional investigations to adequately understand the extent of any contamination, and plan for its cleanup, as necessary.
- **Guideline Hazardous Materials-3:** Implement BMPs to discourage the use of environmentally damaging or hazardous materials for maintenance and management activities. CPSRA complies with the BMPs required by the San Francisco Department of Public Health Hazardous Materials Unified Program Agency, which include the following: store all incompatible hazardous materials/wastes separately and segregate them to prevent accidental mixing (e.g., acids from bases; poisons from flammables; oxidizers from flammables, etc.); ensure all hazardous materials/wastes are properly labeled with the following information: the title “hazardous waste”; generator information; composition and physical state; hazard property; and accumulation start date; ensure all hazardous material/waste containers are capped when not in use;
- **Guideline Hazardous Materials-4:** During implementation of specific site development projects, develop and implement a Construction Traffic Management Plan that specifies truck routes that would avoid residential streets and nearby schools, including Gilman Avenue and Bret Harte School.

Geology

CPSRA's history of development on artificial fill poses unique challenges, and plans for park improvements would require future study of the quality of the underlying substrates. In addition, the park's location in the San Francisco Bay Area on a number of faults, including the San Andreas and Hayward faults, makes it susceptible to earthquakes. CPSRA management staff should plan to mitigate these risks while moving forward with implementing park improvements.

Goal Geology-1

Provide for public safety and minimize structural failures due to seismic activity and related geologic hazards.

- **Guideline Geology-1:** Conduct soil testing prior to implementing park improvements that require substantial earthmoving. If testing reveals potential instabilities or other hazards, develop specific construction methods to ensure the safety of staff and visitors. Given the seismically active environment and the potential for liquefaction and/or subsidence of bay fill and saturated clay-rich soils, avoid construction of facilities that could collapse or injure the visiting public during a seismic event.
- **Guideline Geology-2:** Conduct geotechnical and engineering evaluations as appropriate when locating and designing park improvements to avoid or reduce potential damage to people and property from unstable soil, coastal erosion, storm surge, floods, earthquakes, and tsunami inundation.
- **Guideline Geology-3:** Build all structures in conformance with seismic design criteria in the Uniform Building Code or California Building Code. Inspect all buildings as soon as possible after any large earthquake affecting the San Francisco Bay Area to ascertain damage.

4.6.4 Community and Cultural Resources

CPSRA is an integral element of the local community, and provides a key destination for the statewide community of current and potential visitors.

Community Programs and Facilities

CPSRA is an important open space resource for the surrounding community, currently providing areas for recreation, community gatherings, and special events. The park experiences high levels of visitor use from residents in the Bayview Hunters Point neighborhood. The adjacent planned redevelopment, coupled with current recreation trends, will likely increase CPSRA's popularity as a destination for local community members and regional visitors. The provision of adequate and appropriate public access to encourage visitors to easily enter and use all areas of the park will help to

integrate CPSRA into the neighborhood and maximize the community's involvement in community programs and facilities.

Goal Community-1

Create programs and spaces that promote community cohesion and engagement.*

- **Guideline Community-1:** Promote community gathering through facilities such as group picnic and special event areas and enhanced beaches. Provide space for social programs (e.g., school programming, senior activities).*
- **Guideline Community-2:** Develop a small watercraft facility to provide a center for community gathering, educational programs, and increased recreation on San Francisco Bay.*
- **Guideline Community-3:** Encourage community-oriented events, such as farmers markets near the Community Garden and small concerts in Candlestick Meadows, to build a sense of community at CPSRA.*
- **Guideline Community-4:** Provide programs that are intergenerational, meeting the unique needs of children, senior citizens, and families, such as boat building, community gardening and fitness programs.
- **Guideline Community-5:** Provide programs and spaces that promote “art in the park”. Create iconic art in the Last Port and Yosemite Slough areas to distinguish CPSRA at its edges and create a sense of arrival at the park.*
- **Guideline Community-6:** Expand the existing Community Garden and native plant nursery to provide greater opportunities for community gathering and programs related to gardening and environmental restoration.*

Goal Community-2

Encourage a variety of special events to foster a sense of community and ownership for CPSRA.

- **Guideline Community-7:** Provide spaces for special events that are multi-purpose and adaptable to a range of event types. Incorporate a range of amenities, and provide appropriate utilities to promote public use. Special events could be held at Candlestick Meadows, the Community Garden, and Heart of the Park, as well as at other locations within the park.
- **Guideline Community-8:** Explore partnerships with adjacent property and facility owners and managers to increase options for special events and share operational responsibilities.

* Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

- **Guideline Community-9:** Site special event facilities in locations accessible by a range of transportation modes. Provide access to flexible parking areas that accommodate cars and buses. Identify opportunities for special event parking.
- **Guideline Community-10:** Locate special event facilities to take advantage of scenic views, where appropriate. Minimize any negative visual impacts by screening undesirable views from inside or outside the park.
- **Guideline Community-11:** Determine the visitor capacity for sites planned for special events. Manage site and visitor activity to minimize adverse impacts from special events. Adapt to changing conditions, activities, and demographics to ensure a high-quality visitor experience that meets the purpose and vision of CPSRA.
- **Guideline Community-12:** Minimize site disturbance by considering rehabilitating existing disturbed or developed sites for event spaces. Protect sensitive natural resources through site design and appropriate use. If needed, implement seasonal restrictions for operations of the nature theater to minimize impacts to wildlife during breeding and nesting seasons. Monitor special events and adapt operations to ensure adequate resource protection.
- **Guideline Community-13:** Publicize event space with local and regional civic groups, recreation interests, and community organizations. Promote joint planning with regional partners to increase the visibility of CPSRA and support program planning and development.

Community Health

As one of the largest open spaces in the Bayview Hunters Point neighborhood, CPSRA plays an important role in the public health of the surrounding community. Park trails and lawn areas provide opportunities for active play, while the Community Garden increases access to healthy food options. By enhancing these facilities and expanding programs that emphasize healthy lifestyles, CPSRA provides an opportunity to help improve the health and well being of local residents in the adjacent neighborhood, and of park users from the Northern California region.

Goal Health-1

Offer programs that promote public health by emphasizing physical activity and healthy food options.

- **Guideline Health-1:** Encourage active recreation by providing a range of facilities, trails, and programs. Expand active play areas and upgrade the existing fitness circuit.
- **Guideline Health-2:** Provide a comprehensive trail system to encourage walking, biking, and other activities. Provide access to CPSRA via planned multi modal transportation nodes.

- **Guideline Health-3:** Continue Community Garden to broaden access to locally grown produce and provide programs on healthy food options and lifestyles.*
- **Guideline Health-4:** Create spaces for street food vendors, with a focus on providing a range of healthy food options. Provide appropriate facilities and utilities to promote public use.

Cultural Resources

Although CPSRA was created almost entirely on fill soils that were placed in the middle of the 20th century, several Native American shellmounds are known to exist in the vicinity of the park. In addition, the mudflats adjacent to CPSRA contain historic ship hulls. It is possible that additional resources from prehistoric and historic eras exist beneath CPSRA's fill soils. Furthermore, the Bay mud underlying portions of the fill soils may contain paleontological resources. As a result, State Parks should take all appropriate measures to protect cultural and paleontological resources potentially present in the park when implementing the General Plan.

Goal Cultural Resources-1

Protect known and potentially present prehistoric and historic resources and paleontological resources.

- **Guideline Cultural Resources-1:** As part of the planning and design process for area-specific projects, and prior to commencement of any ground disturbance, grading, or construction related to new facilities or enhancements, a qualified cultural resource professional will conduct appropriate record reviews and any necessary fieldwork to determine the presence of cultural resources or culturally sensitive areas.
- **Guideline Cultural Resources-2:** If the cultural resources investigations indicate the presence of cultural resources or culturally sensitive areas within or adjacent to areas that will be affected by the proposed activities, such activities will be planned and designed to avoid or minimize impacts to the identified resources. Impacts may be reduced by avoidance, site capping, structural stabilization/preservation, project design and data recovery.
- **Guideline Cultural Resources-3:** In the event that some disturbance to cultural resources is unavoidable, identify appropriate measures and implement them in consultation with a qualified cultural resource professional. Such measures shall be consistent with all applicable rules and regulations relating to the protection of cultural resources.

* Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

- **Guideline Cultural Resources-4:** If cultural resources are discovered during construction activities, the construction contractor shall stop work immediately within 100 feet of the find, notify relevant agencies, and retain a qualified archaeologist to assess the significance of the find and, if necessary, to develop appropriate treatment measures.
- **Guideline Cultural Resources-5:** If paleontological resources are discovered during construction activities, the construction contractor shall stop work immediately within 100 feet of the find and retain a qualified paleontologist to assess the significance of the find and, if necessary, to develop appropriate treatment measures. Measures to mitigate impacts could include sampling and data recovery; and preparation, identification, analysis and curation of fossil specimens and the data recovered.

4.6.5 Interpretation and Education

Interpretation in a setting like CPSRA differs from the formal instruction of a school classroom. The goal of interpretation is not to “teach” visitors facts about the resources of CPSRA, but rather to help visitors find their own personal meanings in the resources and to inspire feelings of stewardship. Opportunities exist to increase the effectiveness, accessibility, and efficiency of interpretation at CPSRA.

Interpretation can make a visitor’s experience at CPSRA more enjoyable, while enhancing his or her understanding and appreciation of the park’s resources. Interpretation promotes recreational enjoyment, visitor safety, cultural and natural resource appreciation, and understanding of management and maintenance practices. It can also educate visitors about how to help preserve the resources they came to enjoy and how to reduce their impacts on the park’s resources, giving visitors a take-home message on the importance of resource protection in their daily lives.

While interpretation frequently leads to learning experiences, school groups visiting CPSRA typically need focused educational programming that aligns with their scholastic curriculum and meets specific learning objectives. State Parks plays a leadership role in providing education programs for California’s grade K-12 school groups. CPSRA holds the potential to offer a variety of curriculum-based education programs for local school groups, especially in partnership with other area interpretation and education providers.

Park Interpretive Significance

As California’s first State Park unit acquired to bring State Park System values to an urban environment, CPSRA provides a unique venue for interpreting the social justice and public benefit aspects of an urban State Park. The site’s transition from San Francisco Bay tidelands to an area entirely created on bay fill to today’s protected public

parkland represents a resource for interpreting changing societal values and better understanding of human impacts on Bay and wetlands ecology.

Skirting over three miles of the western shoreline of San Francisco Bay and including wetlands at the mouth of Yosemite Slough, CPSRA offers visitors opportunities to connect to diverse natural and cultural interpretive resources.

Important natural resources available for interpretation include habitat enhancement areas, tidal mudflats, Yosemite Slough wetlands, shorebirds, native plants, urban wildlife ecology, and resources related to San Francisco Bay, such as weather and wind patterns, marine ecology, geology, hydrology, climate change and sea level rise.

For cultural interpretation, CPSRA offers connections to a number of significant stories relating to the human history of San Francisco Bay. These include use of the shoreline by Native Americans past and present, EuroAmerican exploration and settlement (e.g., early 1900s Italian farmers), Chinese fishing camps, shipwrecks (“ghost ships”) of Candlestick Point, history of the City and County of San Francisco and the Bayview Hunters Point neighborhood, filling of San Francisco Bay tidelots, the protection of San Francisco Bay and development of CPSRA.

Current activities at CPSRA, such as windsurfing, fishing, community gardening, artwork installations, health and fitness exercising, and non-motorized boating also provide opportunities for integrating interpretation into recreation offerings.

From a regional perspective, interpretation at CPSRA offers opportunities to fill gaps and complement interpretive offerings at other San Francisco Bay shoreline parks and nature areas, as well as to bring programs, facilities and media available elsewhere to a currently underserved audience. (Please see Section 2.2: Existing Conditions- Interpretation and Education for an overview of interpretation offered at similar venues in the region.)

Park Interpretation Mission

The mission of interpretation at CPSRA is to create a positive connection between a diverse interpretive audience and the park’s natural, cultural and aesthetic resources, enhancing the visitor experience and increasing appreciation and stewardship of park resources.

Park Interpretation Vision

High-quality interpretation will give visitors to CPSRA enhanced enjoyment and understanding of the significant natural, cultural and aesthetic resources of the park, instilling in visitors a sense of place and the desire to preserve and protect those

resources. Knowledge of the geology, plants, animals, people and scenery of the San Francisco Bay coastal area will promote further understanding of, and interest in, broader science, history, and cultural concepts; will increase visitor safety at the park, and will lead to further protection of important cultural and natural resources both in and outside of the park.

Please refer to Appendix D, CPSRA Draft Concept Master Plan Interpretive Opportunities, which identifies interpretive opportunities within CPSRA.

Themes

Themes represent the “big ideas” or “key take-away messages” that interpretation should provide visitors to CPSRA. Themes express basic concepts about significant resources through single, complete, easily remembered statements. Using themes to guide interpretation engages visitors and helps them find meaning and relevance in diverse facts, experiences and activities. Research consistently shows that visitors remember themes long after they have forgotten facts.

Unifying Theme

The unifying theme of CPSRA provides a conceptual focus for interpretive programs, facilities, and media for the entire unit. The unifying theme also sets the overall interpretive tone and direction, and implies the desired result interpretation should have on visitors’ attitudes and perspectives. The unifying theme is presented through interpretation of primary and secondary themes.

Candlestick Point State Recreation Area Unifying Theme

CPSRA’s heavily altered landscape tells a story of how human activities have changed the San Francisco Bay shoreline, how the natural ecosystem has responded to those changes, and how the value society places on the Bay shoreline environment has changed over time with increased understanding of ecosystem functions, interconnections, and human benefits.

Primary Themes

San Francisco Bay Estuary Theme

Plate tectonics, the Pacific Ocean, global weather patterns, and other natural forces have created the San Francisco Bay Estuary and made it one of California’s most important ecosystems.

This theme covers the geologic formation of San Francisco Bay and its watershed (including the Delta and the watersheds of the Sacramento and San Joaquin Rivers) and the various natural forces and processes that make the estuary such an important ecological habitat. Included under this theme will be interpretation of the Bay's importance to migratory birds on the Pacific Flyway, as well as the Bay's role as a nursery for popular seafood species like Dungeness crab and salmon.

Natural Communities and Adaptations Theme

Although heavily altered by human activities, the shoreline and tidelands of CPSRA provide a protected home for a rich variety of natural communities and species that use well-honed relationships and adaptations to survive.

This theme covers the park's natural communities, from the wetlands of Yosemite Slough and the tidal mudflats extending out from the shoreline into the Bay, to the landscaped inland areas. Included will be the evolutionary adaptations of the plant and animal species that inhabit the various natural communities of the park, including shorebirds, native plants, fish and invertebrates.

Habitat Restoration/Enhancement and Future Challenges Theme

The natural communities at CPSRA have and will continue to benefit from restoration, but they also face challenges from global climate change and other stressors in the future.

This theme covers the extensive restoration/enhancement work by State Parks, volunteers and partners to transform the park's heavily disturbed landscape into productive natural habitat. However, rising sea levels and other impacts from global climate change present significant challenges to the future health of the park's natural communities.

Ohlone Cultural History Theme

The rich natural resources of San Francisco Bay, including the original shoreline area of Candlestick Point, supported the Ohlone people for thousands of years before the arrival of EuroAmerican settlers, and places like CPSRA now provide a setting for revitalization and celebration of Ohlone culture.

This theme covers the lifeways and traditions of the Ohlone people who inhabited the San Francisco peninsula and made extensive use of the natural resources of San Francisco Bay, including CPSRA's current location. Special emphasis will be placed on aspects of Ohlone culture related to shoreline habitat areas, such as wetlands and tidelands, preserved and enhanced at the present-day park. Also to be interpreted are

the impacts of EuroAmerican settlement on the Ohlone, as well as the continued connection to the tribe's cultural heritage maintained by present-day Ohlone.

Site History and Human Impacts on San Francisco Bay Theme

From pristine shoreline to filled-in dumping ground to landscaped parkland, the post-Gold Rush history of CPSRA serves as a microcosm of the human-caused changes to shoreline environments that have taken place throughout the San Francisco Bay Estuary.

This theme looks at CPSRA's site history from the perspective of the many major human-caused changes to San Francisco Bay, from the Gold Rush through the 20th Century to the present-day, including the filling in of vast areas of wetland and tideland habitat, and the decision to protect the Bay from additional fill. Also interpreted will be society's changing understanding and appreciation of San Francisco Bay resources.

Bayview Hunters Point Cultural History Theme

The evolution of the Bayview Hunters Point neighborhood since 1941 reflects the history of segregation in the United States, the 20th Century migration of African Americans from the rural South to the industrialized North, the negative social impacts of poverty and isolation, and the on-going challenges of improving the quality of life in a stigmatized community without losing diversity and affordability.

This theme links the past and present history of the neighborhoods surrounding CPSRA—including the privately owned homes of Bayview and the housing projects of Hunters Point—to the larger stories and issues of racial segregation and social justice in America. An important aspect of interpreting this theme will be accommodating the multiple points of view and diverse meanings different people have for this subject matter.

California's First Urban State Park Theme

A movement to bring State Park recreational and interpretive opportunities to an underserved urban audience resulted in the creation of CPSRA as California's first urban state park.

This theme chronicles the efforts of State Parks, other agencies, political leaders, community groups and diverse citizens to bring State Park values and opportunities to an urban audience. Other aspects of this theme to be interpreted include the social justice aspects of providing State Park opportunities to the residents of the adjacent Bayview Hunters Point neighborhood and CPSRA's role in bringing African Americans into the State Parks system.

Benefits of Recreation Theme

From walking, jogging and bicycling to picnicking, wildlife viewing and community gardening, recreation at CPSRA offers opportunities for relaxation and enjoyment, time with friends or family, spiritual renewal and tangible benefits for health and fitness.

This theme covers the diverse recreational opportunities at CPSRA, describes the benefits of different types of recreational activities and provides tips for getting the most out of each activity.

*Secondary Themes**Candlestick Wind Theme*

The interplay of local topography, proximity to the Pacific Ocean and Northern California's Mediterranean climate frequently creates strong afternoon and evening winds at Candlestick Point; a natural attribute cursed by ball players and sports fans but celebrated by today's windsurfers and kite board enthusiasts.

This theme examines the causes and effects of one of Candlestick Point's most well-known natural features, providing opportunities to interpret present-day recreational windsurfing at CPSR, history of Candlestick Stadium, and San Francisco Bay Area geography, climate and meteorology.

Sailing Ship Graveyard Theme

The original shoreline of what was to become CPSRA once served as a popular "wrecking yard" for obsolete sailing vessels.

This theme covers the period in the late 1800s through the early years of the 20th Century when scores of vessels were run ashore at Candlestick Point, stripped of rope, sails and valuable metals, broken apart, burned, and left to sink onto the tidal mudflats. Interpretation of this theme could include the tangible evidence of "ghost ships" occasionally visible at low tide or unearthed in excavations and be linked to the role of wind powered vessels in the development of San Francisco. It can also complement interpretation of the Candlestick Point Wind Theme, which covers the area's well-known wind patterns and the present-day use of wind power at CPSRA for windsurfing.

Chinese Fishing Camps Theme

Ethnic discrimination played a role in the establishment of a once-thriving Chinese shrimping and fishing industry in San Francisco Bay and in the industry's demise.

This theme examines the period after the completion of the transcontinental railroad, when laid-off Chinese workers, barred from other lines of work, established fishing camps along the San Francisco Bay shoreline and harvested great quantities of fish and shrimp. Interpretation will look at the both the ecological impacts of this industry and the reasons many non-Chinese fishermen lobbied to end it. This theme may also be leveraged to interpret present-day recreational fishing opportunities at CPSRA as well as the ecology of today's San Francisco Bay fishery.

Art in Parks Theme

Public art installations at CPSRA enhance the visitor experience by adding interest to the landscape and encouraging exploration, contemplation and personal interaction with artistic expression.

This theme interprets the various public artworks (both existing and future) at CPSRA, provides guidance on how visitors can interact with and find personal meaning in each installation and, in cases where the art is inspired by a unique aspect of the area (e.g., the existing “Wind Tunnel” sculpture), encourages the visitor to experience a park attribute in a unique way.

Interpretive Periods

Interpretive periods define the specific time periods that interpretation at CPSRA will cover. A primary interpretive period focuses interpretation on the time period of greatest significance in the park's cultural history. The significance is determined by important events associated with the park site, or by notable existing historic or prehistoric resources at the site. Choosing the primary and secondary interpretive periods also involves considering what stories are best told in a particular park, the distinctiveness of the resources, the amount of information available to draw upon, and the relatable physical evidence available for visitors. A secondary interpretive period designates a time period that is worthy of interpretation but that should receive less emphasis than the primary period. Except for major natural phenomena, such as earthquakes or fire, interpretive periods are generally only set for cultural resource interpretation.

Primary Interpretive Periods

Native California Indian Period: Prehistory to 1850s

This period includes the prehistoric and post-European contact lifeways and histories of the Native California Indians who utilized the resources of the western shoreline of San Francisco Bay for thousands of years, and whose descendants still live in the San Francisco Bay Area.

EuroAmerican Exploration and Settlement Period: 1769 to the 1900s

Beginning with the Portolá expedition that passed near Candlestick Point in 1769, and the de Anza expedition that passed nearby in 1776, this period includes the settlement of San Francisco and the surrounding Bay Area by EuroAmerican immigrants before, during and after the Gold Rush.

Modern Site History Period: 1941 to the Present

This period includes major developments in the 20th and 21st centuries that have shaped CPSRA. The 1940s saw the rapid expansion of the Hunters Point Shipyard and accompanying filling of adjacent tidelands during World War II and the transformation of the semi-rural, predominately Italian, Hunters Point and Bayview neighborhoods into predominately African-American urban housing for wartime workers. The 1950s brought construction of Candlestick Stadium, and the 1960s saw construction of the Alice Griffith public housing project and the discriminatory housing policies of that era. In the 1970s, there was the movement to create California's first urban state park at Candlestick Point. The early 21st century has involved changes at CPSRA and in adjacent land use associated with the Candlestick Point-Hunters Point Shipyard Phase II Project and the on-going habitat restoration work at Yosemite Slough and elsewhere in CPSRA.

Secondary Interpretive Periods

Ship Graveyard Period: 1870s to 1910

This period includes the years when a cove in the original shoreline at Candlestick Point served as a popular “wrecking yard” for obsolete sailing ships. Scores of vessels were run ashore, stripped of rope, sails and valuable metals, broken apart, burned and left to sink onto the tidal mudflats.

Chinese Fishing Camp Period: 1869 to 1939

This period covers the years when Chinese fishing camps dotted the western shoreline of San Francisco Bay near Candlestick Point. The most significant time span for the Chinese shrimp and fish industry in San Francisco Bay began when the completion of the transcontinental railroad in 1869 left Chinese worker unemployed and restricted from other industries. Chinese shrimping thrived in the area until restrictive tax measures in the 1880s, and the outlawing of the bag net in 1910 led most fishermen to abandon the industry.

Interpretive Collections

Collections of resource-related objects, whether for use as touchable interpretive props during interpretive programs or for display in exhibits, will be useful in future interpretation at CPSRA. Hands-on or displayed objects will be especially important for

interpreting themes that have no remaining tangible evidence at the park, such as themes related to Native American culture or 19th Century Chinese fishing camps. At this time, CPSRA lacks any interpretive collections. It is important to develop a Scope of Collections Statement for acquiring interpretive objects in the future.

As noted earlier in the Existing Conditions section, artifacts and reproduction objects related to cultural history themes at CPSRA may be available in the existing State Parks collections. Natural history specimens to aid interpretation of the park's ecology-related themes may be collected on-site or acquired from other State Park collections or the collections of non-State Park agencies doing similar interpretation.

Interpretation and Education Goals and Guidelines

Interpretation

Goal Interpretation-1

Interpretation will support park management goals, including public safety and resource protection, which will increase compliance to rules, visitor safety, and the public's enjoyment and appreciation of the park, and will inspire public support and adoption of resource protection behavior beyond their park visit.

- **Guideline Interpretation-1:** Use interpretive techniques to deliver wayfinding and park orientation information, and public safety messages, such as health advisories at fishing piers concerning potential contamination of certain Bay fish and water quality safety advisories at beaches.
- **Guideline Interpretation-2:** Interpret management programs to restore, enhance and preserve CPSRA's significant natural and cultural resources. This will include interpreting wetland restoration and/or enhancement projects at Yosemite Slough and the South Basin shoreline. Use interpretive techniques to inform visitors about the park's sensitive resources and ways in which to minimize adverse impacts to these resources.
- **Guideline Interpretation-3:** Interpret State Parks' measures to incorporate sustainability into park operations, reduce global warming, and adapt to climate change. Inspire park visitors to adopt similar measures in their daily lives.

Goal Interpretation-2

Interpretation at CPSRA will highlight the distinctive features of the park, and put them into a regional and statewide context.

- **Guideline Interpretation-4:** When developing interpretive programs and interpretation plans for CPSRA, focus on the exemplary values and stories of the

park and how they relate to the resources, programs, facilities, and stories of surrounding areas and to State Parks' statewide interpretation and education program. For example, interpretation of the lifeways of the area's early inhabitants can focus on the Ohlone people, which can then be put in the context of the other tribes in the region who used the resources of San Francisco Bay, and California Indians statewide.

- **Guideline Interpretation-5:** Research and develop opportunities to coordinate and partner with other shoreline interpretive facilities in the area and with nearby State Parks (including San Bruno Mountain State Park, China Camp State Park, Eastshore State Park and Angel Island State Park) to tell the regional story of cultural and natural resources. This can be done with joint programs, or by referring to interpretation in another facility where visitors can learn more about a certain topic. For example, interpretation of the Chinese fishing camp period along the Bay shoreline can refer visitors to China Camp State Park for more information on Chinese shrimping and fishing in San Francisco Bay. Interpretation of EuroAmerican exploration of the area can refer visitors to the programs and media available for nearby sections of the Portola and de Anza travel routes available through the National Park Service's Juan Bautista de Anza National Historic Trail. Interpretation of Yosemite Slough wetlands ecology can provide information on visiting other shoreline resource-based interpretive facilities in the area, such as the EcoCenter at nearby Heron's Head Park, Crissy Field Center on the northern shoreline of the San Francisco peninsula, and the San Francisco Bay Model in Sausalito. Each interpretive venue will tell its part of the larger story.

Goal Interpretation-3

CPSRA visitors will make connections between natural, cultural, aesthetic, and recreational resources, and understand individual natural and cultural resources at CPSRA as part of larger processes and relationships.

- **Guideline Interpretation-6:** Integrate natural, cultural, aesthetic, and recreational interpretation. Interpret wildlife, plants, and people (past, present, and future) in the context of CPSRA's ecology, and in the context of the varied cultural landscape components in the park.
- **Guideline Interpretation-7:** Demonstrate how perceptions of San Francisco Bay shoreline resources, particularly wetland and tideland areas, have changed over time, leading to vastly different approaches to using these areas. Include efforts to "reclaim" tidelands for agricultural and industrial use, former use of CPSRA as a dumping ground for urban waste, and present-day habitat restoration/enhancement and recreational activities.

- **Guideline Interpretation-8:** Interpret processes and relationships (patterns, cycles, interactions and adaptations) rather than isolated facts. For example, the various shorebirds that can be seen feeding on CPSRA's mudflats at low tide can be used to discuss evolutionary adaptations that suit each shorebird species to its environment, and the threat that human impacts on any aspect of that environment pose to the species' populations.

Goal Interpretation-4

Interpretation will be engaging, address multiple learning styles, reach a broad audience and be universally accessible.

- **Guideline Interpretation-9:** Emphasize tactile, auditory and object-related media that are dynamic and dramatic. For example, interpretation of the Native American heritage of CPSRA can be enhanced with touchable reproductions of Ohlone lifeway objects and audio of present-day Ohlone sharing stories and songs. Interpretation of CPSRA tidal marsh areas can be enhanced with touchable props related to shoreline and mudflat plants and wildlife, audio of commonly seen CPSRA shorebirds, and direct experience with the resource—for example, feeling the mud on a mudflat or the stem of a pickleweed plant.
- **Guideline Interpretation-10:** Use a well-designed mixture of media to make interpretation interesting and accessible to all. For example, personal interpretation such as guided interpretive mudflat and tidal marsh walks; self-guiding non personal interpretation such as wayside signs and exhibits; and other media such as demonstrations, audio-visual programs and brochures.
- **Guideline Interpretation-11:** Consider the use of remote interpretation techniques (e.g., interactive websites, live webcams, podcasts, downloadable/mailable activity books, State Parks' PORTS program and other remote media) to reach a wider audience. Wetland restoration and/or enhancement activities at Yosemite Slough and the South Basin shoreline would be good candidates for remote interpretation. These techniques could reach students in area schools who could remotely access CPSRA educational resources for classroom activities, those visitors who would like a close-up look at sensitive wildlife habitats without adversely impacting the habitat, visitors with disabilities who cannot access certain park areas, and potential visitors interested in CPSRA and its resources.
- **Guideline Interpretation-12:** Continue to explore the possibilities of new technologies (e.g., social media, cell phone "apps") to further enhance CPSRA's interpretive presentations, and broaden the audience and venues for park interpretation.

Goal Interpretation-5

Use partnerships and cooperative relationships to expand interpretation resources and opportunities.

- **Guideline Interpretation-13:** Work with interested parties, especially with those in the Bayview Hunters Point neighborhood and other communities in southeast San Francisco, to provide environmental education, research, and restoration opportunities.
- **Guideline Interpretation-14:** Develop a cooperating association and volunteer programs to improve park interpretive resources, programs, and opportunities. This will include recruiting, training and managing volunteers/docents and providing them materials and props needed for hands-on interpretation. Outreach efforts should be made to ensure significant participation by nearby residents, especially of the Bayview-Hunters Point and other communities in southeast San Francisco.

Goal Interpretation-6

Provide respectful interpretation of the various cultures and ethnic groups associated with CPSRA, including the Ohlone, 1800s Chinese fishermen, early 1900s Italian farmers, World War II-era African-American shipyard workers and present-day residents of the Bayview Hunters Point neighborhood.

- **Guideline Interpretation-15:** Work with appropriate native California Indian groups to develop culturally respectful interpretation of CPSRA's connection to Ohlone lifeways pre and post EuroAmerican contact.
- **Guideline Interpretation-16:** Work with representatives of the San Francisco Bay Area's Chinese community to develop culturally respectful interpretation of CPSRA's connection to the late 1800s Chinese fishing industry in San Francisco Bay.
- **Guideline Interpretation-17:** Work with representatives of the San Francisco Bay Area's Italian community to develop culturally respectful interpretation of CPSRA's connection to the late 1800s – early 1900s Italian agriculture and settlement in the Bayview Hunters Point area.
- **Guideline Interpretation-18:** Work with representatives of the San Francisco Bay Area's African-American community to develop culturally respectful interpretation of CPSRA's connection to World War II-era African-American shipyard workers.
- **Guideline Interpretation-19:** Work with representatives of the present-day Bayview Hunters Point neighborhood to develop culturally respectful interpretation of CPSRA's connection to the adjacent community.

Goal Interpretation-7

Provide interpretation facilities in appropriate locations that effectively serve the interpretation goals and guidelines for CPSRA.

- **Guideline Interpretation-20:** Maximize the use of interpretive facilities to enhance visitor experiences with CPSRA's resources, climate, and the surrounding environment.
- **Guideline Interpretation-21:** Develop interpretive facilities that can serve as multi-use areas, such as an outdoor classroom along the South Basin shoreline, an interpretive area that could include an enclosed structure or an outdoor pavilion along the north side of Yosemite Slough, and a nature theater in a location offering sweeping views of the Bay.

Education

Goal Education-1

Create meaningful educational and interpretive opportunities to promote lifelong learning.

- **Education Guideline-1:** Develop programs and partnerships with local schools, youth groups, colleges, and universities that are in alignment with state educational standards and the Park's significant resources (e.g., access to the San Francisco Bay, restored tidal wetlands, Ohlone and European settlers).
- **Education Guideline-2:** Offer park programs that meet the diverse needs of students, parents, instructors, and schools. This includes programs such as in-school programs, after-school programs, remote learning programs, student internships, professional mentoring, and student service projects that serve both residents of the Bayview Hunters Point community and those farther afield in **California**.
- **Education Guideline-3:** Provide programs and facilities that educate visitors about CPSRA's natural resources, cultural history, and role as California's first urban state park.

Recommendations for Future Interpretation Planning Efforts

Additional interpretive planning will be required before CPSRA can implement programs, facilities and media based on the themes, periods, goals and guidelines defined in this General Plan. The next steps in CPSRA interpretive planning will guarantee that each interpretive service in the park will fit with and enhance other services, be inclusive of diverse audiences and stakeholders, be universally accessible and meet interpretive objectives. Well-thought-out future planning will also save money

by reducing false starts and unnecessary project work, organizing program management, and prioritizing interpretive services in order of need.

State Parks uses a four-level structure for interpretation planning, of which this General Plan is the first step. Subsequent planning steps, described below, should be undertaken as soon as feasible after adoption of this General Plan.

Below is an outline of State Parks' four-level planning process:

- General Plan interpretation sections, defined in the Planning Division's Planning Handbook, (2002, rev. April 2010) provide unifying primary and secondary themes, primary and secondary interpretive periods for historic interpretation, and interpretation goals and guidelines.
- Interpretation Master Plans (IMPs) translate the General Plan goals and guidelines into specific goals and measurable objectives to accomplish those goals, giving strategies to meet those objectives. IMPs also recommend new interpretive services as strategies.
- Interpretation Action Plans (IAPs) prioritize the strategies, list tasks that must be done to implement each strategy, and identify by position who will be responsible for each task.
- Interpretive Service Plans (ISPs) get down to the concrete level of detailed planning of projects and programs that are part of the strategies for the park. The timing of the ISP development is based on the tasks and priorities in the Interpretation Action Plan.

As soon as staff and funds become available, CPSRA should complete an Interpretation Master Plan (IMP) and Interpretation Action Plan (IAP) to more specifically define future park interpretation and to use as a tool to prioritize interpretation strategies and seek funding. The IMP and IAP can recommend any further planning needed for CPSRA.

4.6.6 Operations

Infrastructure and operations are at the core of a functional unit and integral to meeting the park's purpose and vision and managing resources and visitor uses.

Staffing

Well-managed park operations depend on adequate levels of staffing. This will be particularly important for CPSRA, as the park experiences increased visitor use as a result of park improvements and planned development in the surrounding neighborhood. The park will be a 24/7/365 operation and the staffing needs will have to address this operation. A larger on-site staff will be needed to expand educational and interpretive programs, enhance natural resource management, increase community

involvement, keep facilities clean and well maintained, and minimize safety concerns. CPSRA has a long history of partnering with volunteers and local organizations to increase its capacity. This General Plan builds on these relationships and seeks to identify new opportunities for collaboration within the community and beyond.

Goal Staffing-1

Provide adequate staffing between park, Sector, and District to serve the public and achieve the mission and purpose of CPSRA.

- **Guideline Staffing-1:** Provide the proper staffing balance for CPSRA's land management, infrastructure maintenance, resource preservation, and visitor services programs.
- **Guideline Staffing-2:** Develop and implement innovative strategies to supplement staffing needs and build on existing support programs such as volunteer programs and partnerships.
- **Guideline Staffing-3:** Continue community outreach efforts in partnership with neighborhood organizations and provide opportunities for community involvement in the operation of CPSRA. Improve community outreach through the creation and staffing of a State Parks information center in the adjacent neighborhood.

Facilities and Maintenance

Adequate maintenance of park facilities is essential to the provision of a high-quality visitor experience. Properly and regularly maintained facilities and grounds contribute to the safe and enjoyable use of recreational facilities, management of important park resources, and the aesthetic character of the park. Maintenance of CPSRA will be particularly important, given the anticipated volume of year-round visitors and the proximity of residential and commercial uses.

Goal Facilities-1

Provide maintenance and administration facilities that enable effective and efficient management of CPSRA.

- **Guideline Facilities-1:** Retain and upgrade the existing location of CPSRA's maintenance and administration facilities, and explore opportunities for sharing maintenance facilities and responsibilities with other local agencies and organizations, such as the San Francisco Recreation and Parks Department and the San Francisco Neighborhood Parks Council and new park and recreation areas planned in the Hunters Point Shipyard and at Candlestick Point.

- **Guideline Facilities-2:** Ensure that trails allow for service vehicle access throughout the park. Design park service roads so that maintenance vehicles and equipment can easily access all visitor serving areas.
- **Guideline Facilities-3:** Screen maintenance and storage areas and trash disposal facilities to the extent feasible so that they are not openly visible from public use areas.
- **Guideline Facilities-4:** Ensure adequate office space for rangers, maintenance staff, administrative staff, and volunteers to provide self-contained onsite management.
- **Guideline Facilities-5:** Ensure careful coordination with the City and County of San Francisco regarding the grading transition from the planned Candlestick Point-Hunters Point Shipyard Phase II Project to CPSRA. Manage this grade transition in a way that enhances visitor experience, allows for ADA accessibility, and considers stormwater management.

Neighborhood Integration, Access, Multi-Modal Transportation, and Parking

The planned Candlestick Point-Hunters Point Shipyard Phase II Project adjacent to CPSRA and the land uses proposed in this General Plan will increase integration of the park into the surrounding neighborhood. The creation of new, high-density residential and commercial areas adjacent to the park will also increase the permeability of the park's boundary. Multiple access points throughout the park will replace the existing main entrance station. Redevelopment and roadway, transit, bikeway and pedestrian improvements in the surrounding neighborhood will increase the level of activity at CPSRA. These changes will make CPSRA accessible via a variety of transportation modes, but they also highlight the need for the park to coordinate access, circulation, and parking to provide a high quality visitor experience and minimize impacts to park resources and character.

Neighborhood Integration

Goal Integration-1

Promote increased connectivity between CPSRA and the surrounding neighborhood.

- **Guideline Integration-1:** Extend the urban grid into CPSRA along new pathways to create multiple access points and improve access to the park for pedestrians and bicyclists.
- **Guideline Integration-2:** Create new park gateways from wedge parks (narrow parks planned within the surrounding neighborhood that lead to the Candlestick

Meadows and Heart of the Park areas) and BRT stops to enhance access and connect CPSRA to the adjacent neighborhood.*

- **Guideline Integration-3:** Install a State Parks-staffed “information center” in the surrounding neighborhood and information kiosks along the edges of the park to provide visitor information on CPSRA and the State Park System.

Goal Integration-2

Provide appropriate economic opportunities for the local community.

- **Guideline Integration-4:** Advertise opportunities for employment associated with constructing, operating and maintaining park programs and facilities, as well as business or concession opportunities (e.g., equipment rental, street food vendors, etc.) in adjacent neighborhoods to promote economic opportunities for the local community.

Access

Goal Access-1

Promote efficient access and circulation throughout the park for a variety of travel modes.

- **Guideline Access-1:** Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts.
- **Guideline Access-2:** Coordinate with the City and County of San Francisco, Caltrans, and other relevant public agencies regarding the management of vehicle, bicycle, and pedestrian traffic. Coordination with these agencies will especially be needed to address changes in traffic conditions that would occur as a result of the planned development projects in the area and potential new uses at the existing Candlestick Park stadium.

Multi-Modal Transportation

Goal Multi-Modal-1

Promote improved multi-modal access to the park in concert with improvements planned in the surrounding neighborhood.

- **Guideline Multi-Modal-1:** Enhance access to the park through connections to new pedestrian and bicycle route alignments planned in the surrounding neighborhood.
- **Guideline Multi-Modal-2:** Connect to new and planned alternative transportation modes, including pedestrian routes, bike paths, and BRT stops.

* Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

- **Guideline Multi-Modal-3:** Integrate the new Class 1 bikeway planned adjacent to and within the CPSRA with access points to the park.* Create a Class I bike commuter connector along the Last Port area to provide a continuous bike connection between CPSRA, the adjacent street grid, and BRT stops.
- **Guideline Multi-Modal-4:** Create clear pedestrian and bicycle linkages to CPSRA from new BRT stops.*
- **Guideline Multi-Modal-5:** Provide information kiosks near new BRT stops in the adjacent neighborhood to direct riders to CPSRA.*
- **Guideline Multi-Modal-6:** Work with the California Coastal Conservancy and its partner agencies, who implement the Bay Area Water Trail, and the San Francisco Neighborhood Council and its partners, who administer the Blue Greenway Project, to facilitate access to CPSRA via non-motorized watercraft. Provide boat launches, landing areas, campsites and other facilities to improve access for non-motorized boats.

Goal Multi-Modal-2

Improve access by promoting walking and biking to CPSRA.

- **Guideline Multi-Modal-7:** Provide a comprehensive and varied trail network to increase pedestrian and bicycle opportunities within CPSRA.*
- **Guideline Multi-Modal-8:** Work with the San Francisco Bay Trail Project, a nonprofit organization administered by the Association of Bay Area Governments, to extend the Bay Trail through CPSRA to provide continuous off-street pedestrian and bicycle opportunities for regional visitors, transit users and commuters.*
- **Guideline Multi-Modal-9:** Provide nighttime lighting along the CPSRA perimeter and the San Francisco Bay Trail to improve visitor and commuter safety.

Parking

Goal Parking-1

Provide sufficient parking to meet the needs of local, regional and statewide users.

- **Guideline Parking-1:** Provide parking in strategic areas for programs requiring staging, such as windsurfing, non-motorized boating, and picnicking.*
- **Guideline Parking-2:** Reuse existing parking areas and locate new parking areas to minimize the amount of new construction.*
- **Guideline Parking-3:** When planning for additional parking opportunities, consider other parking options in the immediate area. The planned Candlestick Point-Hunters

* Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

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Point Shipyard Phase II Project will create additional parking in the surrounding neighborhood, some of which CPSRA visitors may use while recreating at the SRA.

- **Guideline Parking-4:** Consider a range of options to ensure that sufficient parking is available to CPSRA visitors, especially as planned developments in the neighborhood are completed and visitor use increases. Possible parking management options may include setting CPSRA parking fees to be commensurate with metered parking and parking garage fees outside of the park; installing pay machines inside the park and requiring visitors to walk into the park to pay for parking; and requiring purchase of a day-long or hourly parking pass. Care should be given to assess potential conflicts with residential parking demand, the needs of both existing and new neighborhood residents who visit the park, and the needs of visitors from throughout the region and around the state. Consider partnering with adjacent recreation area managers and landowners to provide additional parking.

Universal Access

State Parks is committed to making parks accessible to people with a wide range of physical abilities, as identified in the California State Accessibility Guidelines (Accessibility Guidelines) (State Parks 2009). The Accessibility Guidelines state that accessibility is influenced by the location and type of park and that basic services and experiences need to be accessible to all people with disabilities, while maintaining the intrinsic qualities of the place.

CPSRA is located in an urban setting; park designers should consider specific park features and programming when designing the location and type of accessibility improvements. The accessibility guidelines below apply to restrooms, trails, boat launches, campsites, and other facilities that will be included in CPSRA.

Goal Universal Access-1

Provide universal access to park programs and facilities such as buildings, restrooms, trails, parking, and other common use facilities, including recreational areas.

- **Guideline Universal Access-1:** Consider accessibility in the design of visitor facilities, and provide access for visitors with limited mobility throughout the park to the greatest extent feasible.
- **Guideline Universal Access-2:** Develop all public access and facilities consistent with Americans with Disabilities Act requirements and the *State Parks Accessibility Guidelines*.
- **Guideline Universal Access-3:** Connect all major destinations in the park with the appropriate level of routes or provide access to persons with limited mobility, unless precluded by environmental factors identified at the time of design.

Visitor Safety

Visitor safety is an important concern at CPSRA. The park will be open 24 hours per day, 7 days per week, 365 days per year, and will have multiple access points that will further integrate CPSRA into the surrounding urban fabric and facilitate increased visitor use. These changes will place visitor safety at the forefront of CPSRA operations, as State Parks strives to deliver a safe and enjoyable visitor experience.

Goal Visitor Safety-1

Provide a safe and enjoyable experience for all park users.

- **Guideline Visitor Safety-1:** Coordinate with local law enforcement agencies and emergency response providers to promote the safety of park visitors. Incorporate community involvement, education and outreach programs to enhance safety.
- **Guideline Visitor Safety-2:** Coordinate with local law enforcement and other agencies and organizations managing urban parks to encourage communication about innovative security techniques and design.
- **Guideline Visitor Safety-3:** Promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA.
- **Guideline Visitor Safety-4:** Manage park service roads to allow easy and rapid access to CPSRA by public safety personnel and emergency vehicles.
- **Guideline Visitor Safety-5:** Develop and implement a visitor safety program for special events and during peak recreation periods.

Goal Visitor Safety-2

Provide natural areas that balance solitude and safety.

- **Guideline Visitor Safety-6:** Accommodate an increase in visitor use resulting from development of the surrounding neighborhood to provide a sense of security through increased visitation and activity levels.*
- **Guideline Visitor Safety-7:** Use design strategies to increase natural surveillance. Consider the location and visibility of park facilities, landscape design, visual surveillance, lighting, and patrol vehicle accessibility to enhance safety.
- **Guideline Visitor Safety-8:** Use design strategies to enhance and maintain CPSRA landscapes to provide natural areas that also feel safe.*
- **Guideline Visitor Safety-9:** Give public safety a high priority when planning and designing specific locations and configurations of park plan elements to accommodate an increase in visitors and ensure that more isolated areas of the park are safe. Control access by creating both real and perceptual barriers to entry and

* Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

movement, and use design to define ownership and encourage maintenance of territories (e.g., fences, tree lines, hedges, paths, gates, changes in elevation, signage). Take advantage of design to provide opportunities to see and be seen (e.g., lighting, building location and orientation, proper selection of trees and shrubs, and regular maintenance to ensure views are preserved).

Goal Visitor Safety-3

Develop a program that promotes the safety of park visitors, employees, and property as CPSRA evolves in response to changing neighborhood conditions.

- **Guideline Visitor Safety-10:** Ensure sufficient State Parks ranger staffing to patrol CPSRA. Explore opportunities to share resources with adjacent parks and recreation facilities at Candlestick Point and the Hunters Point Shipyard, as well as with the San Francisco Police Department, and other security services.
- **Guideline Visitor Safety-11:** Engage neighborhood residents to participate in public safety efforts for the park through ongoing outreach and coordination and by providing them with contact information in case they observe anything suspicious at CPSRA.
- **Guideline Visitor Safety-12:** Install nighttime lighting and signage, and deploy night patrols as needed to provide oversight during extended hours. Consider operational options such as closing the park from 10:00 p.m. to 5:00 a.m., closing at dusk, or 24/7 operation.

Park Branding

Goal Park Branding-1

Continue to distinguish and brand CPSRA as a state recreation area with a specific mission and purpose. Establish a clear identity for CPSRA that reflects its uniqueness, but that also brands it as part of the regional San Francisco Bay Trail, San Francisco Bay Area Water Trail and Blue Greenway and open space systems, and as a flagship for the California State Park system.

- **Guideline Park Branding-1:** Emphasize the State Parks brand to distinguish CPSRA from surrounding city or neighborhood parks through incorporation of signage, the State Parks logo, and other strategies.
- **Guideline Park Branding-2:** Make information on the larger State Parks system available to CPSRA visitors to encourage visitation to other units throughout the region and the state and to help visitors understand the mission of State Parks. Provide this information to the public at the State Parks information center planned within the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and at gateway kiosks located along the perimeter of CPSRA.

- **Guidelines Park Branding-3:** Enhance CPSRA's uniqueness and identity through authenticity in design, with a design framework and feature elements that relate to the historic, environmental, and cultural stories specific to this site. Create design guidelines that tie together different phases of park improvements and establish a comprehensive and cohesive design character through the use of similar styles and/or materials for paving, planting, pedestrian bridges, fencing, lighting, structures, trails, and other park facilities and improvements.
- **Guidelines Park Branding-4:** Work with planning partners to create design guidelines for wayfinding and identity signage that establish a unifying and coordinated approach to accommodating the State Parks, San Francisco Bay Trail, San Francisco Bay Area Water Trail and Blue Greenway brands.
- **Guidelines Park Branding-5:** Establish access points into the park, and develop design standards for these “gateway” areas that will create a sense of arrival and establish an initial identity and sense of place for CPSRA. Design standards and guidelines for access points should distinguish primary and secondary gateways.

Agreements and Concessions

CPSRA has entered into a number of agreements regarding the future development, operation and maintenance of the park, pertaining to the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project. These agreements provide a unique opportunity for the park to implement this General Plan, and they will require continued collaboration with the City and County of San Francisco.

State Parks has a partnership agreement with the California State Parks Foundation to complete the final design, construction estimates and permitting phase of the Yosemite Slough Restoration Project. This project has received \$14.3 million from multiple funding sources, including the Wildlife Conservation Board/State Coastal Conservancy, Association of Bay Area Governments, Bay Conservation Development Commission, the City and County of San Francisco, Bay Area Rapid Transit (BART), the Richard and Rhoda Goldman Foundation, U.S. EPA Region 9 - San Francisco Bay Water Quality Improvement Fund/San Francisco Estuary Partnership, the S.D. Bechtel, Jr. Foundation, the San Francisco Foundation, the Barkley Fund, and the California Department of Parks and Recreation. The restoration project provides mitigation credits for two of the funding sources, the City and County of San Francisco and BART.

The California State Parks Foundation has entered into an agreement with Lennar Urban that governs both the design and the process related to permitting the proposed bridge across the mouth of Yosemite Slough.

Opportunities also exist for CPSRA to enter into new agreements to allow for concessions that would expand the range of recreational opportunities possible at the park. It is important that all agreements respect the purpose and vision of CPSRA.

Agreements

Goal Agreements-1

Ensure that all easements, access agreements, or other legal arrangements are in the best interests of State Parks and consistent with CPSRA's purpose and vision.

- **Guideline Agreements-1:** Continue to collaborate with the City and County of San Francisco and the developers of adjacent neighborhoods to ensure that phasing, implementation, funding, and maintenance of improvements at CPSRA enhance park resources, and visitor experience.
- **Guideline Agreements-2:** Coordinate with the City and County of San Francisco to ensure adequate monitoring, maintenance, and operation of stormwater easements and infrastructure located within CPSRA.
- **Guideline Agreements-3:** Work with the City and County of San Francisco to plan for rising Bay levels around Yosemite Slough.
- **Guideline Agreements-4:** Work with the City and County of San Francisco to ensure that the design and operations of the Yosemite Slough Bridge minimize impacts to bicyclists and pedestrians accessing CPSRA via the new bridge.
- **Guideline Agreements-5:** Investigate and seek opportunities for securing easements or park additions that would improve the quality, character, functionality and resource buffer of CPSRA.
- **Guideline Agreements-6:** State Parks will manage its submerged lands to protect marine resources and encourage appropriate and safe water-based recreation"

Concessions

Goal Concessions-1

Develop appropriate concession agreements in CPSRA to expand and enhance visitor services and encourage healthy, active lifestyles.

- **Guideline Concessions-1:** Prioritize concessions that enhance access to San Francisco Bay, expand the range of recreation options at CPSRA, and promote healthy activity, such as non-motorized boat and bike rentals and a boating center.
- **Guideline Concessions-2:** Encourage concessions that promote healthy food choices, such as farmers markets and street food vendors.

- **Guideline Concessions-3:** Provide flexible spaces that offer a range of opportunities for concessions locations, while minimizing their impacts on park resources.

Energy, Water, and Waste

By minimizing the use of energy and water, and the generation of waste, CPSRA would help protect resources and reduce maintenance needs. Implementing the following guidelines in the design, improvements, operations, and maintenance of CPSRA would also demonstrate the principles of sustainability and their incorporation into an urban open space setting. This would also enhance environmental education and interpretive programs at the park and encourage park visitors to make sustainable choices as well.

Energy

Goal Energy-1

Enhance energy efficiency, and expand the use of renewable resources.

- **Guideline Energy-1:** Clearly identify the actual purpose of lighting to determine minimum acceptable levels. Light the minimum area for the minimum time. Limit illumination to areas with actual night use or security concerns. Ensure that lighting will be directed downward to minimize light spillage.
- **Guideline Energy-2:** Use renewable energy sources for lighting and other outdoor power, where feasible. Photovoltaic (PV) power is often cost effective, and may be used for applications such as solar path-lights, streetlights, security lights, pumps, and irrigation systems. Integrate PV panels into the architectural design of buildings and structures.

Water

Goal Water-1

Implement conservation measures to minimize water use at CPSRA.

- **Guideline Water-1:** Use low-flow water fixtures within newly constructed facilities, and consider incorporating them into existing facilities.
- **Guideline Water-2:** Use water-efficient irrigation design and systems for landscaping. Where feasible, use reclaimed water or recycled water for uses such as landscape irrigation, fire protection, toilet flushing, wetlands recharge, and outdoor water features.
- **Guideline Water-3:** Plant indigenous vegetation and species suited to the local environment to minimize water use.

Waste

Goal Waste-1

Minimize the generation of waste from park construction, operations, and maintenance.

- **Guideline Waste-1:** Reduce material use through effective site layout. Consider factors such as renewability and recyclability when selecting materials. Where possible, specify reused and/or recycled-content materials (e.g., wood substitutes, concrete, asphalt, etc.) for site use, based on life-cycle performance requirements.
- **Guideline Waste-2:** Install recycling receptacles and educational signage throughout CPSRA to encourage park visitors to recycle and educate them about the benefits of reducing waste.
- **Guideline Waste-3:** Include composting in vegetation management and maintenance activities to reduce landfill usage and increase sustainability concepts for the park.
- **Guideline Waste-4:** Provide an easily accessible area for collection and storage of non-hazardous materials for recycling and composting.*
- **Guideline Waste-5:** Consider implementing a monofilament recycling program to educate fishermen on the dangers of fishing line for many wildlife species and to provide opportunities to reduce monofilament waste in the environment.

4.7 Zone-Specific Goals and Guidelines

4.7.1 Tidal Marsh Zone

Goal Tidal Marsh-1

Create a Tidal Marsh Zone at CPSRA that promotes ecological processes and natural shoreline conditions characteristic of the San Francisco Bay.

- **Guideline Tidal Marsh-1:** Protect and enhance existing tidal wetlands at CPSRA. Minimize disturbance to existing wetlands, and implement any mitigation onsite, where possible.
- **Guideline Tidal Marsh-2:** Restore tidal wetlands in Yosemite Slough through continued implementation of the Yosemite Slough Restoration Project in partnership with the State Parks Foundation and local neighborhood organizations.
- **Guideline Tidal Marsh-3:** Extend the Tidal Marsh Zone along the South Basin shoreline to connect to Yosemite Slough and improve habitat for shorebirds, small

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mammals, and other wildlife that depend on tidal marshes. Enhance existing pockets of tidal marsh at other points along the CPSRA shoreline.

- **Guideline Tidal Marsh-4:** Use natural materials and a native-based plant palette in the Tidal Marsh Zone to maximize ecological functions and minimize disturbance to sensitive resources.
- **Guideline Tidal Marsh-5:** Manage visitor use to provide opportunities for education and interpretation while protecting existing and enhanced tidal wetlands from degradation.
- **Guideline Tidal Marsh-6:** Adopt an adaptive management approach for the creation and enhancement of the Tidal Marsh Zone, given the uncertainties surrounding the restoration of wetlands on artificial fill. Coordinate with the Yosemite Slough Restoration Project during development of this adaptive management approach.

4.7.2 Grassland/Coastal Shrub Zone

Goal Grassland/Coastal Shrub-1

Manage the Grassland/ Coastal Shrub Zone with a focus on providing wildlife habitat and opportunities for low-impact recreation.

- **Guideline Grassland/Coastal Shrub-1:** Maximize the connectivity of Grassland/Coastal Shrub Zone across different geographic areas of CPSRA to preserve and enhance wildlife migration corridors and other important ecological functions.
- **Guideline Grassland/Coastal Shrub-2:** Provide opportunities for nature-based recreation (e.g., trail use and wildlife viewing), that are low-impact and minimize disturbance to wildlife. Small-scale facilities, such as family gathering areas, and natural surface trails are most appropriate in the Grassland/Coastal Shrub Zone. Create the nature theater as a flexible facility that provides opportunities for special events or quiet recreation, such as relaxing, when not in use. If necessary, implement seasonal restrictions regarding the nature theater to protect nesting and breeding wildlife.
- **Guideline Grassland/Coastal Shrub-3:** Monitor visitor use to ensure that it does not degrade sensitive resources, such as wildlife habitat, and adjust management, as necessary.
- **Guideline Grassland/Coastal Shrub-4:** Create a wildlife habitat focus area within the Candlestick Meadows area that preserves and enhances habitat for birds, small mammals, and other common wildlife known to occur at CPSRA. Manage the wildlife habitat focus area in a manner that may also support wildlife with a potential to occur at the park.

- **Guideline Grassland/Coastal Shrub-5:** Use natural materials and plant species native to the San Francisco Bay Area to maximize the habitat value of the Grassland/Coastal Shrub Zone. Select vegetation species to ensure that this zone serves as a transition area between the Tidal Marsh and Coastal Native Zones.
- **Guideline Grassland/Coastal Shrub-6:** Maintain landscapes in the Grassland/Coastal Shrub Zone so that they appear natural and un-manicured.

4.7.3 Coastal Native Zone

Goal Coastal Native Zone-1

Create an aesthetically pleasing area that serves as a transition area between the surrounding neighborhood and CPSRA.

- **Guideline Coastal Native Zone-1:** Select a planting palette for the Coastal Native Zone that is visually pleasing for both CPSRA visitors and residents in the surrounding neighborhood. Include a variety of trees, shrubs, and other plant species that are native to the San Francisco Bay Area or California.
- **Guideline Coastal Native Zone-2:** Create a transitional landscape that provides visual and sound buffers between the adjacent and quieter areas of CPSRA, such as the Candlestick Meadows and Last Port areas. Maintain landscapes in the Coastal Native Zone so that they appear natural and not overly landscaped.
- **Guideline Coastal Native Zone-3:** Manage the Coastal Native Zone as a “linear park” with trails to facilitate visitor movement throughout CPSRA.
- **Guideline Coastal Native Zone-4:** Provide buffer areas with fire resistant plantings and landscape features between the Grassland/Coastal Shrub Zone and adjacent developed areas.

4.7.4 Active Recreation Zone

Goal Active Recreation Zone-1

Site facilities and spaces designed for more intense recreational use in the Active Recreation Zone.

- **Guideline Active Recreation Zone-1:** Locate visitor facilities that are larger and/or provide more active recreational opportunities in areas of the Active Recreation Zone. Ensure convenient access, suitable parking, and the appropriate provision of amenities, such as restrooms, to meet the needs and volumes of visitors in this zone.
- **Guideline Active Recreation Zone-2:** Concentrate group-sized gathering areas, park features and programs that tend to generate noise near each other, to provide

a balance between areas of intense use in the Active Recreation Zone and areas that provide more nature-based activities.

- **Guideline Active Recreation Zone-3:** Provide gathering areas for special events such as weddings and family gatherings in the Active Recreation Zone.
- **Guideline Active Recreation Zone-4:** Create and manage the Heart of the Park as the hub of activity in CPSRA and a destination for active recreation. Provide a range of facilities, trails, and recreational and interpretive programs geared around higher-impact activity and visitor use. Focus on opportunities for recreation that take advantage of the Bay, such as fishing and viewing piers, bike-in/boat-in camping, and a boating center.
- **Guideline Active Recreation Zone-5:** Site facilities expected to attract high levels of visitor use, such as the boating center, Jackrabbit Beach, and enhanced windsurf facilities, in the Active Recreation Zone.
- **Guideline Active Recreation Zone-6:** Provide visitor information kiosks within the Active Recreation Zone to maximize the interface with visitors to CPSRA.
- **Guideline Active Recreation Zone-7:** Use vegetation types and materials designed to handle high levels of visitor use. Create open lawn areas with irrigated turf that may serve multiple purposes, such as for group gathering, active play, or picnicking.

4.7.5 Beach Shoreline Zone

Goal Beach Shoreline Zone-1

Manage the Beach Shoreline Zone at CPSRA to provide for a range of recreational opportunities.

- **Guideline Beach Shoreline Zone-1:** Enhance existing beaches to expand recreational opportunities. Expand Jackrabbit Beach by selectively removing some revetment and/or adding sand, and create a destination for more intensive recreation. Emphasize opportunities for solitude or quieter recreation at the beaches at Hermit's Cove and Candlestick Cove.
- **Guideline Beach Shoreline Zone-2:** Conduct a study to explore creating a small beach on the north side of the point to increase access to the Bay and serve as a landing area for the boats to access the campground. Conduct technical, site-specific studies to determine the best approach to creating a beach that serves boaters over the long term.
- **Guideline Beach Shoreline Zone-3:** Use structures, such as groynes, to facilitate the accretion of sand and subsequent expansion of Jackrabbit Beach and the beach at Hermit's Cove. Create structures that serve multiple uses, such as fishing and viewing piers.

- **Guideline Beach Shoreline Zone-4:** Adopt an adaptive management approach regarding the long-term preservation of beaches at CPSRA, given the threat of sea level rise. Consider a range of options, including but not limited to, extending beaches inland and beach nourishment.
- **Guideline Beach Shoreline Zone-5:** Restrict dogs from the Beach Shoreline Zone to minimize user conflicts, maximize the visitor experience, and protect sensitive resources.

4.7.6 Community Garden/Plant Nursery Zone

Community Garden/Plant Nursery Zone-1

Expand the existing Community Garden/Plant Nursery Zone to provide greater opportunities for community gathering and programs related to urban farming and environmental restoration.*

- **Guideline Community Garden/Plant Nursery-1:** Expand the existing Community Garden to broaden access to locally grown produce and provide programs on healthy food options and lifestyles.
- **Guideline Community Garden/Plant Nursery-2:** Use the Community Garden for composting, and educate park visitors about the park's composting program
- **Guideline Community Garden/Plant Nursery-3:** Expand the existing native plant nursery to increase its capacity for propagating native plants and providing related educational programs. Where possible, use the native plant nursery to propagate and supply native plants for use in future plantings within CPSRA.
- **Guideline Community Garden/Plant Nursery-4:** Manage the Community Garden/Native Plant Nursery Zone in partnership with community groups and other stakeholders, building on existing relationships with organizations such as Literacy for Environmental Justice.

4.7.7 Administration/Maintenance Zone

Goal Administration/Maintenance Zone -1

Provide maintenance and administration facilities that enable effective and efficient management of CPSRA.

- **Guideline Administration/Maintenance-1:** Retain the existing location of CPSRA's maintenance and administration facilities, and explore opportunities for sharing

* Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

maintenance facilities with new park and recreation areas planned in the Hunters Point Shipyard and at Candlestick Point.

- **Guideline Administration/Maintenance-2:** Screen maintenance and storage areas and trash disposal facilities, to the extent feasible, so that they are not openly visible from public use areas.
- **Guideline Administration/Maintenance-3:** Ensure adequate office space and parking for rangers, maintenance staff, administrative staff, and volunteers to provide self-contained onsite management.

4.8 Carrying Capacity

4.8.1 Methodology

State Parks is required to assess carrying capacity issues in drafting General Plans to comply with Section 5019.5 of the PRC. State Parks defines carrying capacity as a prescribed number and type of visitors that an area will accommodate given the desired natural/cultural resource conditions, visitor experiences, and management programs.

State Parks defines Visitor Capacity Management as “a methodology used to determine and maintain the desired resource and social conditions that fulfill the purpose and mission of a park. It includes establishing initial visitor capacities, then monitoring key indicators in order to identify appropriate management actions in response to unacceptable conditions.”

The variety of factors involved in damage to natural and recreational resources and the complexity of the interactions among the factors makes establishment of carrying capacity numbers difficult. Management policies and procedures are established to regulate capacity limits and land use, implement mitigation measures, educate the public, assist park managers, and ensure proper design of park land uses and facilities. Determination of resource location and significance allows management to create guidelines for future public use and access to CPSRA.

Adaptive Management

An adaptive management process recognizes that management actions will have uncertain outcomes and thus, it is important to adjust management and research decisions to better achieve management objectives. The steps that typically compose an adaptive management process for State Parks are presented below. Steps 1 through 3 were completed as part of the General Plan preparation process while steps 4 through 7 should be implemented over time, as the goals and guidelines identified in this General Plan are implemented.

Step 1. Identify Existing Opportunities and Constraints

Step 2. Determine Vision and Desired Conditions

Step 3. Identify Issues and Evaluate Alternatives

Step 4. Develop Measurable Indicators and Thresholds

Step 5. Establish Initial Visitor Capacities

Step 6. Monitor Use and Identify Changing Conditions

Step 7. Adjust Environmental or Social Conditions

Research, Investigations, and Monitoring

Data from research, pre-project site investigations, visitor impact assessments, post-project evaluations, and baseline resource monitoring can all be captured and used to ensure that the desired condition of the park is maintained. A program of continued research and site investigations provides information and documents updated data on resource conditions and new problems as they may occur. Periodic surveys provide a measure of visitor satisfaction and identify recreation trends and public opinions on the types of activities and experiences people are seeking. These ongoing efforts build the State Recreation Area unit data file for CPSRA for subsequent planning and analysis, and monitoring programs ensure that development actions achieve the desired outcomes.

Visitation, individual or group usage, time, and types and patterns of recreational use will all contribute to impacts on CPSRA natural and recreational resources. Due to the anticipated pressure from the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project, implementation of steps 4 through 7 listed above are vital to the success of adaptive management for CPSRA. Furthermore, as future redevelopment occurs in the vicinity of CPSRA, ongoing adaptive management will assist the park manager in revisiting and adjusting the visitor carrying capacity for various parts of CPSRA.

Table 4-1 contains a sampling of indicators that are developed based on the management goals in this General Plan, which are related to carrying capacity. It should be noted that the carrying capacity indicators may be modified on a regular basis based on site-specific knowledge, ongoing observations in the field, and updates in scientific understanding.

Table 4-1: Carrying Capacity Desired Outcomes and Indicators

Goals	Planning Zones	Indicators	Potential Management Actions
Visitor Facilities-1 Provide visitor facilities within the park as needed to facilitate the public's enjoyment of the natural setting and resources.	All Planning Zones	<ul style="list-style-type: none"> • Visitors complain about lack of necessary facilities or overcrowding. • Evidence of destruction/damage to natural areas. 	<ul style="list-style-type: none"> • Limit access during peak times to natural areas. • Make necessary improvements to facilities to alleviate overcrowding/overuse.
Vegetation-1 Maximize the preservation and enhancement of existing native vegetation at CPSRA.	<ul style="list-style-type: none"> • Tidal Marsh • Grassland/Coastal Shrub • Coastal Native • Beach Shoreline 	<ul style="list-style-type: none"> • Evidence of destruction/damage to native vegetation. • Reduced occurrences of special-status species. • Presence of invasive species and/or evidence of dispersion. 	<ul style="list-style-type: none"> • Restore damaged areas. • Revegetate disturbed areas with native species. • Install temporary fencing. • Install signage to inform visitors of sensitive wetland areas and other native vegetation areas. • Increase or adjust removal program for invasive species. • Restrict use of affected areas. • Conduct periodic field surveys.
Wildlife-1 Maintain, protect and/or enhance habitat for wildlife species in CPSRA.	<ul style="list-style-type: none"> • Tidal Marsh • Grassland/Coastal Shrub • Coastal Native • Beach Shoreline 	<ul style="list-style-type: none"> • Evidence of destruction/damage to habitat. • Reduced occurrences of special-status species. • Wildlife is disturbed by visitors. 	<ul style="list-style-type: none"> • Close sensitive habitat areas during breeding and nesting seasons. • Conduct periodic field surveys. • Install signage to educate visitors and encourage them to stay on trails near sensitive habitats.

Table 4-1: Carrying Capacity Desired Outcomes and Indicators

Goals	Planning Zones	Indicators	Potential Management Actions
Cultural Resources-1 Protect known and potentially present prehistoric and historic resources and paleontological resources.	All Planning Zones	<ul style="list-style-type: none"> • Disturbance to discovered archaeological sites. • Observe evidence of cultural resources during excavation and grading activities 	<ul style="list-style-type: none"> • Limit visitor use in any sensitive areas that are discovered. • Provide interpretation and public education opportunities to assist with protection of cultural resources. • Consult Native American representatives and cultural resources specialists if cultural resources are discovered to direct management response.
Staffing-1 Provide adequate staffing to serve the public and achieve the mission and purpose of CPSRA.	All Planning Zones	<ul style="list-style-type: none"> • Existing staff cannot respond adequately to public concerns and overcrowding conditions. 	<ul style="list-style-type: none"> • Increase staff as appropriate and as feasible. • Evaluate facilities and adequate staffing. • Limit the number of special events held in the park. • Limit public access to certain areas of the park.

Table 4-1: Carrying Capacity Desired Outcomes and Indicators

Goals	Planning Zones	Indicators	Potential Management Actions
Parking-1 Provide sufficient parking to meet the needs of local, regional and statewide users.	All Planning Zones	<ul style="list-style-type: none"> • Lack of parking spaces during regular hours and conditions. • Visitor complaints about lack of parking. • Observed use of CPSRA parking by local residents (not park visitors). 	<ul style="list-style-type: none"> • Monitor parking lot use. • Close parking areas at night. • Impose parking fees. • Adjust parking fees as needed to ensure adequate spaces are available for park visitors. • Promote alternative modes of transportation.

4.9 General Plan Phasing Process

Specific park improvements that would be implemented under the General Plan would be phased in conjunction with the land exchange between State Parks and the City and County of San Francisco for the Candlestick Point-Hunters Point Shipyard Phase II Project, which was authorized under Senate Bill 792. The land exchange will occur in phases over the next 20 years, as construction of the Candlestick Point-Hunters Point Shipyard Phase II Project moves forward. As a result, the timing and location of this construction will affect the implementation of programs planned for CPSRA in this General Plan. State Parks will develop a list of park improvements following approval of the General Plan, and individual projects will be identified from that list and prioritized.

5 Environmental Analysis





5 Environmental Analysis

5.1 Introduction

The environmental impact analysis presented in this chapter is based on the information presented in the Candlestick-Hunters Point Shipyard Phase II Draft Environmental Impact Report (SFRA and SFPD 2009), which presented a detailed, project-level analysis of the proposed development of and adjacent to CPSRA. However, because this is a program-level EIR for a General Plan, that detailed project-level analysis is not presented in this document.

5.1.1 Purpose of the EIR

This General Plan for the Candlestick Point State Recreation Area (CPSRA) constitutes an environmental impact report (EIR), as required by Public Resources Code (PRC) Sections 5002.2 and 21000 et seq. The General Plan is subject to approval and the EIR is subject to certification by the California State Park and Recreation Commission (State Parks). State Parks has sole authority for the plan's approval and adoption. Following certification of the EIR and approval of the General Plan by State Parks, State Parks will prepare management and development plans as staff and funding become available. Future projects that implemented after approval of the General Plan for CPSRA may be subject to permitting requirements and approval by other agencies, such as the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and San Francisco Bay Conservation and Development Commission (BCDC).

5.1.2 Focus of the EIR

The Notice of Preparation for this General Plan was circulated to the appropriate federal, state, and local planning agencies. Comments received during the planning process were considered during preparation of this General Plan and EIR, which was prepared to address environmental impacts that may result from implementing the management goals and guidelines. Emphasis is given to significant environmental impacts that may result from future development and from operation of CPSRA consistent with these goals and guidelines.

5.1.3 Subsequent Environmental Review Process

The General Plan and EIR serve as a first-tier EIR, as defined in Section 15166 of the State CEQA Guidelines. Tiering in an EIR, particularly for a program-level project such as a general plan, allows agencies to consider broad environmental issues at the general plan stage. Additional parkwide or site-specific projects and appropriate CEQA compliance will follow the General Plan and EIR, when specific development and management programs are proposed. It should be noted that subsequent environmental documents will incorporate, by reference, the general analysis from the program-level EIR included here, and concentrate on the issues specific to the characteristics of subsequent projects (State CEQA Guidelines Section 15152).

5.1.4 Contents of the EIR

The EIR includes the following sections:

Introduction: This section includes a brief overview of the environmental review process, focus, and content of the EIR, and approach to the environmental analysis.

EIR Summary: This section includes a summary of environmental impacts associated with the proposed General Plan, and an overview of the environmental effects of alternatives considered to the preferred General Plan.

Project Description: This section provides an overview of the proposed General Plan, which is the focus of the program EIR, including a description of General Plan elements and proposed phasing related to the land exchange between State Parks and the City and County of San Francisco. The full description of the General Plan is presented in Chapter 4, Park Plan.

Environmental Setting: This section notes that the existing (baseline) conditions for environmental issues or resources that may be potentially affected by implementation of the General Plan are addressed in Chapter 2, Existing Conditions, which details the

environmental setting for this EIR. For some resource topics, additional environmental setting information is provided in this chapter, as needed.

Environmental Effects Eliminated from Further Analysis: This section describes the environmental topics that did not warrant detailed environmental analysis and the supporting rationale.

Environmental Impacts: This section provides a program-level analysis of the potential environmental impacts associated with implementing the General Plan.

Other CEQA Considerations: This section contains information on other CEQA-mandated topics, including significant and unavoidable impacts, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts.

Alternatives to the Proposed Project: The section describes the alternatives to the General Plan (including the No Project Alternative) that are considered in this EIR and provides an analysis of the associated environmental effects of these alternatives relative to the General Plan.

5.2 EIR Summary

5.2.1 Summary of Impacts and Mitigation

The CPSRA General Plan reflects State Parks' dual mandates as a steward of natural and cultural resources and a provider of recreation opportunities. Chapter 4, Park Plan, identifies goals and guidelines for visitor experience, natural resources, community and cultural resources, interpretation and education, and operations. These goals and guidelines seek to minimize and/or avoid potentially significant adverse effects on the environment.

An evaluation of the potential for significant adverse environmental impacts—including impacts on aesthetic resources, air quality, climate change, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation and traffic, and utility and service systems—is provided in Section 5.6.

As discussed in Section 5.5, the following topics were eliminated from further analysis: agricultural and forestry resources, energy and mineral resources, population and housing, and recreation.

Implementation of the General Plan is not expected to result in significant impacts on the environment. Implementation of the goals and guidelines contained in Chapter 4,

Park Plan, in conjunction with federal, state, and local laws and regulations, avoids potential significant effects or maintains them at less-than-significant levels.

5.2.2 Summary of Alternatives Considered

This EIR analyzes potential impacts of the General Plan (proposed project), the No Project Alternative, and three additional alternatives that present different development scenarios for CPSRA. The alternatives analysis is presented in Section 5.8.

5.3 Project Description

Chapter 4 of this General Plan includes the project description and presents the overall long-range purpose and vision for CPSRA. An overview of the proposed General Plan Preferred Alternative is presented below.

The General Plan provides a general overview of the proposed enhancements, including the following planning zones:

- Tidal Marsh Zone
- Grassland/Coastal Shrub Zone
- Coastal Native Zone
- Active Recreation Zone
- Community Garden/Plant Nursery Zone
- Beach Shoreline Zone
- Administration/Maintenance Zone

CPSRA includes seven distinct geographic areas, including Yosemite Slough, South Basin Shoreline, Candlestick Meadows, Heart of the Park, The Point, The Neck, and Last Port, within which a mix of activities and facilities will occur. Please refer to Figure 4-1 in Chapter 4, Park Plan, for the location and extent of the geographic areas and major features of the General Plan Preferred Alternative.

In addition, the General Plan Preferred Alternative identifies enhancements to the Bay Trail, additional piers and improvements to existing piers, areas proposed for coastal shoreline treatments, and water recreation facilities.

The management goals and supporting guidelines in Chapter 4, Park Plan, are designed to address the critical planning issues identified through the planning process and to mitigate any adverse environmental effects of development, management and uses that would be permitted at CPSRA.

5.4 Environmental Setting

Existing conditions that characterize CPSRA, including descriptions of the important resource values present and the regional planning context, are described in Chapter 2, Existing Conditions. Additional setting information is provided in the following discussion by specific resource topic, where necessary.

5.5 Environmental Effects Eliminated from Further Analysis

The following topics were eliminated from further analysis in the EIR because no potential exists for significant environmental effects related to these resources to result from implementation of the General Plan. A brief reason for their elimination is provided for each respective topic.

5.5.1 Agricultural and Forestry Resources

Implementation of the General Plan would not convert any “Important Farmland,” as identified by the California Department of Conservation Farmland Mapping and Monitoring Program, nor does the park contain any lands under Williamson Act contracts. Implementation of the General Plan would not result in the conversion of any agricultural land to non-agricultural uses or forestland to non-forest uses. The park’s Community Garden, which offers city residents individual garden plots to grow their own vegetables, will continue to operate under the proposed General Plan. Therefore, no significant effects would occur on agricultural and forestry resources and no further environmental analysis on the effects on agricultural and forestry resources is necessary.

5.5.2 Energy and Mineral Resources

CPSRA is not located within an area with existing or historic energy or mineral extraction land uses, and neither the California Department of Conservation nor the City of San Francisco designate it as an important mineral or energy resource. Therefore, implementing the General Plan would not result in the loss of availability of known mineral or energy resources that are or would be of value to the region and residents of the state, or result in the loss of a locally important site for recovering mineral or energy resources. No further discussion of mineral or energy resource impacts is required in this EIR.

5.5.3 Population and Housing

The CPSRA General Plan provides for recreational improvements and restoration of native plant communities at an existing State Recreation Area. CPSRA is currently

accessible to residents and visitors, and will also be available for use by future residents of the planned Candlestick Point-Hunters Point Shipyard Phase II Project. However, implementation of the General Plan would not facilitate additional development in nearby areas. Therefore, implementation of the CPSRA General Plan would not induce growth, either directly or indirectly, in the area and no further environmental analysis on the effects on population and housing is necessary.

It should be noted that the San Francisco Redevelopment Agency will reserve 11 workforce housing units within the Candlestick Point-Hunters Point Shipyard Phase II Project for State Parks staff. These housing units are reserved so State Parks staff can rent them at workforce housing rates; the City will not pay for these units.

5.5.4 Recreation

Implementation of the General Plan would expand recreational opportunities at CPSRA by developing new recreational facilities and enhancing existing facilities on the site. The General Plan would not result in increased deterioration of local or regional parks or the need to construct additional recreational facilities to serve additional demand. Therefore, further environmental analysis on the effects on recreation is not necessary.

5.6 Environmental Impacts and Mitigation

The following sections analyze potential impacts by resource topic. The criteria used to determine the significance of impacts in the following resource discussions were derived from Appendix G (environmental checklist) of the State CEQA Guidelines.

The General Plan has been developed to guide development and management of CPSRA in a way that is most appropriate to fulfill the park vision and the State Parks mission (Section 1.8.1, Planning Hierarchy). Through the application of the General Plan's goals and guidelines, the plan will be largely self-mitigating.

5.6.1 Land Use and Planning (LU)

Environmental Setting

Please refer to Section 1.1, Location and Regional Context, and Section 1.2.2, Existing Features and Land Uses within the Park, for descriptions of surrounding land uses and existing land uses within CPSRA.

Regulatory Setting

Refer to Section 2.6, Planning Influences, in Chapter 2, Existing Conditions, for a description of existing plans relevant to the proposed project.

The descriptions of the local land use plans in this section are intended to provide the planning context in which the project site is located.

Significance Criteria

Implementing the General Plan would have a significant impact related to land use and planning if it would:

- physically divide an established community;
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- conflict with any applicable habitat conservation plan or natural community conservation plan.

Impact Analysis

Impact LU-1: Potential for the Project to Physically Divide an Established Community.

CPSRA is located along the shore of San Francisco Bay in the vicinity of existing neighborhoods and industrial areas, and immediately adjacent to the planned Candlestick Point-Hunters Point Shipyard Phase II Project Site. Implementation of the General Plan would result in restoration of coastal native vegetation and development of recreational facilities within the existing park boundaries, and would not divide the adjacent community. Therefore, the project would not create a barrier that would block connections between neighborhoods. As a result, the General Plan would have **no impact** related to the physical division of a community.

Impact LU-2: Conflict with Any Applicable Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect.

There are a number of federal, state and local plans, programs, policies, and initiatives that address environmental concerns for San Francisco Bay and adjoining land areas. Those plans that are applicable to CPSRA are discussed below, grouped by the environmental topics that are the focus of each plan. Refer to Section 2.6, Planning Influences, in Chapter 2 of this General Plan for a description of each plan listed below.

Trails Plans and Bicycle Plans

The following plans and initiatives generally promote a system of land and water trails and greenways, or seek to expand and improve the existing bicycle network and promote bicycling as an alternative form of transportation in San Francisco:

- California Recreational Trails Plan
- San Francisco Bay Trail Project
- Regional Bicycle Plan for San Francisco Bay 2009
- San Francisco Bike Plan
- San Francisco Bay Area Water Trail (Draft Plan)
- Blue Greenway

The General Plan would include completion, repair, and improvement of the Bay Trail, a portion of which has been completed at CPSRA. The General Plan would also provide opportunities for development of bike-in/boat-in camping facilities in CPSRA. Guideline Recreation-1 promotes planning for recreation opportunities within a regional context, including coordination with local agencies and integration of park facilities with regional trail systems. Therefore, the General Plan would generally be consistent with these plans.

Plans Promoting Expansion of Open Space

The following plans and policy documents generally promote a comprehensive open space network connected to residential areas, an increase in open space, or contain policies that focus on acquisition of new open space and recreation facilities in neighborhoods that lack open space and recreational resources in San Francisco:

- Open Space 2100
- San Francisco General Plan
- Recreation and Park Acquisition Policy

San Francisco's Recreation and Park Acquisition Policy, in particular, identifies the area immediately north and west of CPSRA as a high-priority area (behind highest priority areas) in need of open space and recreation improvements.

Reconfiguration of the park boundary as a result of the land exchange between State Parks and the City and County of San Francisco would remove land from some areas of the park and add land to others. The new boundary includes additional land north of Harney Way, resulting in relocation of the roadway and expansion of the narrowest portion of the park from a width of 20 feet to 200 feet. This expansion increases connectivity between the Main Park (Heart of the Park) and the Last Port, and creates

opportunities for improvements to the existing windsurf launch, the beach at Hermit's Cove, and Bay Trail. The new boundary also removes some areas of CPSRA, notably the area that contains the existing main entrance. The General Plan would relocate the main entrance and would develop new recreational facilities at CPSRA. The General Plan would improve recreational facilities and create new recreational facilities that would be accessible to residents in the vicinity of CPSRA, including areas that have been identified as being in need of open space and recreational resources.

Implementation of Goal Visitor Facilities-2 would expand opportunities for recreation that focus on San Francisco Bay, and implementation of Goal Recreation-1 and its supporting guidelines (Guidelines Recreation-1 through Recreation-4) would provide a variety of recreational opportunities that would allow visitors from neighboring communities and from throughout the region and state to visit and enjoy CPSRA. Therefore, the General Plan would generally be consistent with these plans.

Plans Promoting Public Access to the Shoreline

The following plans and policy documents generally encourage the development of waterfront recreation facilities and linkages between existing shoreline parks, access to public trust lands, enhancement of existing shoreline open space, and recreational access to the Bay:

- San Francisco Bay Plan
- State Lands Commission Trust Doctrine
- San Francisco General Plan
- San Francisco Estuary Project Comprehensive Conservation and Management Plan

The proposed General Plan would include completion, repair and improvement of the Bay Trail, which has been partially completed on CPSRA. The proposed General Plan would also provide opportunities for development of bike-in/boat-in camping facilities in CPSRA. The proposed General Plan would improve recreational facilities and access to the shoreline of the Bay, and would restore habitat, including tidal salt marsh, grassland and coastal native shrub to the shoreline. Implementation of Goal Visitor Facilities-2 would expand opportunities for recreation that focus on San Francisco Bay. Therefore, the proposed General Plan would generally be consistent with these plans.

Plans Addressing Other Land Use Issues

The following plans generally address land use issues with a focus on revitalization and addressing conflicts between incompatible land uses:

- Bayview Hunters Point Area Plan

- San Francisco Estuary Project Comprehensive Conservation and Management Plan
- Candlestick Point-Hunters Point Shipyard Phase II Project
- Executive Park Neighborhood Plan

As previously described, the General Plan would remove land from some areas of the park and add land to others. However, the General Plan would not alter existing land uses within the park. Recreational land uses would remain the focus of CPSRA, with the addition of habitat restoration, which would enhance passive recreation on the site. The General Plan would improve existing and create new recreational facilities that would be accessible to residents near CPSRA, including areas identified as being in need of open space and recreational resources. Implementation of Goal Community-1 and supporting guidelines would create programs and spaces that promote community cohesion and engagement. Implementation of Goal Access-1 and supporting guidelines would promote increased connectivity between CPSRA and the surrounding neighborhoods. Implementation of Guideline Visitor Safety-3 would promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA. Therefore, the proposed General Plan would generally be consistent with these plans.

With implementation of the goals and guidelines discussed above, this impact would be **less than significant**.

Impact LU-3: Project's Potential to Conflict with Any Applicable Habitat Conservation Plan or Natural Community Conservation Plan.

CPSRA is not located within the jurisdiction of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, **no impact** would occur.

5.6.2 Geology and Soils (GEO)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to geology and soils.

Regulatory Setting

No federal, state, regional, or local plans, regulations, or laws related to geology and soils apply to the proposed General Plan.

Significance Criteria

Implementing the General Plan would have a significant impact related to geology, soils, and seismicity if it would:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state Geologist for the area or based on other substantial evidence of a known fault;
 - strong seismic ground shaking;
 - seismic-related ground failure, including liquefaction; and landslides.
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The General Plan for CPSRA does not include proposals to use septic tanks or alternative wastewater disposal systems. Therefore, this topic is not addressed further in this EIR.

Impact Analysis

Impact GEO-1: Risk of Exposure to Geologic and Seismic Hazards, Including Fault Rupture.

As described in Chapter 2, Existing Conditions, CPSRA is located in an area with a number of major active earthquake faults. The San Andreas, San Gregorio, and Hayward Faults are the closest to CPSRA and therefore, are most capable of producing strong ground-shaking (SFRA and SFPD 2009). No known faults cross the site; however, CPSRA would be exposed to groundshaking in the event of an earthquake. No structures for human habitation are planned for CPSRA and risk of exposure to seismic hazards would not be increased as a result of the project. Additionally, Goal Geology 1 and supporting guidelines direct State Parks to conduct design level geotechnical investigations to evaluate structural requirements for specific projects. Compliance with the recommendations of the geotechnical and engineering studies, along with compliance with the Seismic Hazards Mapping Act and the California

Building Code, would provide for design and construction methods that reduce risk related to seismic hazards. This impact would be **less than significant**.

Impact GEO-2: Adverse Effects Caused by Seismic-Related Ground Failure, Including Liquefaction, Landslides, and Expansive Soils.

Soils underlying CPSRA are Urban Land soils, which put the entire site at high risk for liquefaction hazards. The risk of slope failure is low within CPSRA because of the relatively level terrain. Goal Geology 1 and supporting guidelines direct State Parks to conduct professional geologic and engineering evaluations in order to reduce risk of exposure of visitors to seismic hazards.

Compliance with recommendations of the geotechnical and engineering studies, along with compliance with the California Building Code would provide for design and construction methods that reduce risk related to seismic-related ground failure. This impact would be **less than significant**.

Impact GEO-3: Soil Erosion or the Loss of Topsoil.

The erosion hazard rating for the local soils is slight to severe because of the variable nature of the deposits (SFRA 2009: III.I-8). Land disturbance, such as grading can accelerate soil erosion, especially in fragile shoreline areas. Goal Shoreline 1 and supporting guidelines promote appropriate shoreline protection measures and give high priority to shoreline protection in high activity areas. This impact would be **less than significant**.

5.6.3 Hydrology and Water Quality (WATER)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to hydrology and water resources.

Regulatory Setting

In addition to the regulation detailed below, please refer to the Section 2.6, Planning Influences, of this General Plan for more information on regulations related to hydrology and water quality:

- Section 404 of the CWA;
- Section 401 of the CWA;
- Porter-Cologne Water Quality Control Act;
- San Francisco Bay Regional Water Quality Control Board Basin Plan;
- San Francisco's NPDES permits; and

- Section 303(d) of the Clean Water Act (refer to Section 2.1.1, Physical Resources).

Significance Criteria

Implementing the General Plan would have a significant impact related to hydrology and water quality if it would:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality;
- place within a 100-year flood hazard area structures which would impede or redirect flood flows; or
- result in inundation by seiche, tsunami, or mudflow.

The General Plan would not involve construction of housing within a flood hazard area; therefore, this topic is not discussed further in this section.

Impact Analysis

Impact WATER-1: Impacts to Groundwater Supplies or Groundwater Recharge.

Development of CPSRA would reduce the amount of impervious surface area in the park, which would assist groundwater recharge. New facilities and landscaping have the potential to adversely impact groundwater supplies. Implementation of Guidelines Water-1 through Water-3 would implement conservation measures to minimize water use at CPSRA. These guidelines would require the use of low-flow water fixtures, water-efficient irrigation, the use of reclaimed water where feasible, and planting indigenous vegetation. With implementation of these guidelines, this impact would be **less than significant**.

Impact WATER-2: Risk of Loss, Injury, or Death Involving Flooding.

The entire CPSRA shoreline is within SFHA Zone V because of the risk of coastal flooding. Areas adjacent to the shoreline and Yosemite Slough are also within SFHA Zone A, as is a large area along Hunters Point Expressway between the shoreline and Gilman Avenue. Implementation of Guidelines Shoreline-8 and 11, and Geology-2 would assist in minimizing impacts related to flooding at CPSRA. Guideline Shoreline-7 assists in locating new park facilities, considering FEMA flood zone areas and areas projected for coastal flooding from sea level rise. Guideline Shoreline-10 further protects CPSRA from flooding due to anticipated sea level rise, by maintaining a 20-foot-wide adaptive management zone along the shoreline and along the park's inland boundary. Lastly, Guideline Geology-2 requires geotechnical and engineering evaluations to assist in locating and designing park improvements to avoid damage from flooding and other related hazards. With implementation of these guidelines, the impact would be **less than significant**.

Impact WATER-3: Temporary Impacts on Water Quality from Stormwater Runoff, Erosion, or Spills.

As stated in Chapter 2, Existing Conditions, most of the City and County of San Francisco is served by a combined stormwater and wastewater sewer system. The culverted Yosemite Creek carries stormwater runoff from the area surrounding Yosemite Slough to San Francisco's Southeast Water Pollution Control Plant (SWPCP). The SWPCP also treats stormwater generated in the Sunnydale Basin, which includes CPSRA's Last Port area. The SWPCP treats approximately 80% of the City's wastewater flows, which it discharges through a deep water outfall at Pier 80 (SFRA and SFPD 2009; SFPUC 2009a). Most of CPSRA drains directly to the Bay, either as direct runoff or through an outfall located west of Windsurf Circle (The Neck) (SFRA and SFPD 2009).

Project implementation would include ground-disturbing activities during construction, near local drainages and waterways that could become contaminated by soil or construction substances. Development related to the proposed General Plan would not substantially alter the existing drainage pattern of the site or area. The creation of tidal marsh along the South Basin Shoreline would improve erosion and siltation in that area of the park.

Construction activities have the potential to temporarily impair water quality if disturbed and eroded soil, petroleum products, or construction-related wastes (e.g., cement and solvents) are discharged into receiving waters or onto the ground where they can be carried into receiving waters. Soil and associated contaminants that enter receiving waters through stormwater runoff and erosion can increase turbidity, stimulate algae

growth, increase sedimentation of aquatic habitat, and introduce compounds that are toxic to aquatic organisms. Accidental spills of construction-related substances such as oils and fuels can contaminate both surface water and groundwater. The extent of potential impacts on water quality would depend on the following:

- tendency for erosion of soil types encountered,
- types of construction practices,
- extent of the disturbed area,
- duration of construction activities,
- timing of particular construction activities relative to rain events, and
- proximity to receiving water bodies.

The potential for release of soil or construction-related materials into local waterways could adversely affect water quality in these locations. These waterways include Yosemite Slough, South Basin and San Francisco Bay. South Basin receives stormwater discharges from separate drainage systems located in Candlestick Point and the Hunters Point Shipyard, as well as surface drainage from three wet weather overflow points that discharge into Yosemite Slough. Because of South Basin's location and reduced exposure to tidal action, circulation is limited, which in turn can adversely affect contamination levels (SFRA and SFPD 2009). However, State Parks (or their designated contractors) would implement Guideline Water Quality-4, which requires implementation of Project Requirements and BMPs for sediment control and stormwater runoff. In addition to Project Requirements and BMPs, preparation and implementation of a Stormwater Prevention Pollution Plan (SWPPP), filing of a Notice of Intent (NOI) with the San Francisco RWQCB prior to construction activities requiring an NPDES permit, and compliance with NPDES permit conditions would prevent the release of soil or construction-related materials into local waterways.

The SFPUC conducts weekly sampling year round from Jackrabbit Beach and Windsurf Circle (The Neck) within CPSRA and from Sunnydale Cove to the south of the park (Kellogg, pers. comm., 2009) and additional monitoring whenever a treated discharge from the City's combined sewer system occurs that affects a monitored beach (SFPUC 2009a). The causes of elevated bacteria levels are not always clear but are probably related to stormwater runoff from the beaches themselves that might contain human and animal feces, decaying plant and animal material, and naturally occurring soil bacteria (SFPUC 2009b). If bacteria levels exceed state standards, the SFPUC posts "No Swimming" notices at beaches and conducts daily sampling until bacteria levels meet the standards. In addition, permanent information signs are posted at Windsurf Circle (The Neck), where storm drains outside of the City's combined sewer system represent known or potential sources of dry weather contamination during the summer

(SFPUC 2009b). The proposed General Plan would not substantially affect bacteria contaminant levels in discharges to the Bay.

Implementation of Guideline Water Quality-4, implementation of a SWPPP, and compliance with NDPEs permit would ensure water quality impacts from temporary construction activities associated with the General Plan would be **less than significant**.

Impact WATER-4: Impacts on San Francisco Bay Caused by Stormwater Runoff from Operation of the Project Site.

Long-term degradation of runoff water quality can be caused by changes in land use, introduction of new pollutant sources, and increases in impervious surfaces such as parking lots, walkways, or structures. The proposed General Plan contains Guidelines Water Quality-1 and 3, which require the installation of green infrastructure to capture and treat stormwater runoff and the use of BMPs to maximize rainwater infiltration in green infrastructure elements. Guideline Shoreline-1 prioritizes shoreline improvements in areas of observed erosion to safeguard water quality. Guideline Shoreline-6 requires the design and construction of all shoreline enhancements and facilities after site-specific environmental analysis of hydrology and water quality have been completed. Implementation of these guidelines related to stormwater runoff would reduce impacts to **less-than-significant** levels.

Impact WATER-5: Impacts Related to Inundation By Seiche, Tsunami, or Mudflow.

Development related to the General Plan would not substantially increase the exposure of people or structures to inundation by tsunami or seiche. Implementation of Guideline Geology-2 would require geotechnical and engineering evaluations when locating and designing park improvements to avoid or reduce potential damage to people and property from seismically induced damage, including inundation by tsunamis and seiches.

The West Coast/Alaska Tsunami Warning Center in Palmer, Alaska, which is operated by the National Oceanic and Atmospheric Administration (NOAA), issues tsunami watches and warnings as well as tsunami information bulletins for Alaska, British Columbia and Washington, Oregon and California, including the San Francisco Bay Area. Upon receipt of tsunami watches and warnings, coastal NOAA'S Weather Service (NWS) offices such as the San Francisco Bay Area office in Monterey will activate the Emergency Alert System (EAS) via NOAA/All Hazards Weather Radio. All broadcasters (TV, AM/FM radio, cable TV) receive the tsunami EAS message simultaneously as well as those with weather radio receivers in homes, businesses, schools, health care facilities, etc. Upon receipt of tsunami watch and warning messages, local emergency management officials can decide to activate EAS to evacuate low-lying coastal areas in

advance of the initial tsunami wave. Broadcasters and weather radio receivers, who can provide widespread dissemination of these messages, also receive these EAS messages.

CPSRA is relatively flat with no steep slopes in the vicinity of the park; thus, it is not subject to mudflows. Impacts related to inundation by seiche, tsunami, or mudflow would be **less than significant**.

5.6.4 Hazards and Hazardous Materials (HAZ)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to hazards and hazardous materials.

Significance Criteria

Implementing the General Plan would have a significant impact related to hazards and hazardous materials if it would:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact Analysis

Impact HAZ-1: Risk of Public Exposure to Hazardous Materials during Transport, Use, Disposal, or Accidental Release during Project Construction and Operation.

Construction activities may require the use of certain potentially hazardous materials, such as fuels, oils, and solvents for construction equipment. Hazardous materials spills may occur, including into the Bay. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans), and use of these materials is regulated by the California Department of Toxic Substances Control (DTSC), as outlined in Title 22 of the California Code of Regulations. State Parks and their contractors would be required to use, store, and transport hazardous materials in compliance with federal state, and local regulations during project construction and operation. Because the project would implement and comply with existing hazardous materials regulations, it is unlikely that impacts related to creation of significant hazards to the public through routine transport, use, disposal, or accidental release of hazardous materials related to construction or operational activities would be caused by development of the project. Therefore, this impact would be **less than significant**.

Impact HAZ-2: Create a Hazard to The Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment.

As described in Chapter 2, Existing Conditions, CPSRA has been the site of historic dumping, fill, and industrial activities that have resulted in soil and subsurface water contamination, and contamination in the sediments around Yosemite Slough. Additionally, investigations at the nearby former Hunters Point Shipyard site have revealed PCBs in portions of the South Basin and areas bordering the shoreline of CPSRA. The Navy is currently considering remediation alternatives for the shipyard areas. A human health risk evaluation conducted in 1998 concluded that the presence of the detected chemicals in soil and shallow groundwater did not pose a significant carcinogenic or non-carcinogenic risk to nearby residents, workers, visitors, or recreational users of areas adjacent to the Bay (SFRA 2009:III.K-7).

There are no known releases of hazardous materials requiring remediation on CPSRA. However, the detection of low levels of hazardous materials in 1998 along with the general knowledge of the types of material that can be in bay fill, lead to the conclusion that there is a potential for exposure to hazardous materials from development activity in the park. Existing federal and state Occupational Safety and Health Administration (OSHA) regulations require State Parks to prepare a Health and Safety Plan (HASP) prior to development activities involving subsurface disturbance. Guideline Hazardous Materials 1 requires State Parks to prepare a contingency plan to address unknown

contaminants encountered during development activities. This plan would establish and describe procedures for implementing a contingency plan, including appropriate notification and site control procedures, in the event unanticipated subsurface hazards or hazardous material releases are discovered during construction. Additionally, Guideline Hazardous Materials 2 requires State Parks to identify lands where additional environmental investigation is needed in order to identify contaminated areas and plan for appropriate cleanup actions.

State Parks uses pesticides and herbicides where appropriate in the park to help control pests and vegetation. Staff will follow State Parks policies and other state and federal requirements for herbicide and pesticide application, incorporating all safety measures and recommended concentrations. Only chemicals that are appropriate for use near water will be used in areas near the water. Guideline Hazardous Materials 3 promotes best management practices for maintenance and management that discourage the use of environmentally-damaging or hazardous materials. Therefore, with the implementation of the referenced guidelines, this impact would be **less than significant**.

Impact HAZ-3: Risk of Exposure of Schools to Hazardous Materials during Project Construction and Operation.

Bret Harte Elementary school is located within .25 mile of CPSRA, at the intersection of Gilman Avenue and Griffith Street. Construction activities would involve an increase in truck traffic on local roadways, increasing exposure of students to diesel exhaust (see Section 5.6.2, Air Quality, above). Alternate routes are available that would allow construction truck traffic to avoid the school. Compliance with existing regulations and Guideline Hazardous Materials 4, which requires construction traffic management to avoid residential streets and schools, would reduce this impact to a **less-than-significant** level.

Dust generated from soil disturbance at CPSRA could potentially be carried over the school site. Some locations in Candlestick Point are known to contain low levels of contaminants in soil from historic uses; however, there are currently no sites within Candlestick Point requiring remediation. Nonetheless, if a contaminated site is identified during construction, the required Unknown Contaminant Contingency Plan (Guideline Hazardous Materials 1) would specify the necessary dust control requirements, and the required Health and Safety Plan would specify procedures to be protective of workers, which would also help minimize risks to off-site locations. Therefore, the impact would be **less than significant**.

Impact HAZ-4: Interference with an Adopted Emergency Response Plan or Emergency Evacuation Plan.

The existing street grid provides ample access for emergency responders and egress for residents and workers, and the General Plan would neither directly nor indirectly result in changes to access to the surrounding area. Guideline Visitor Safety 4 promotes management of park service roads to allow easy and rapid access to CPSRA by public safety personnel and access for emergency vehicles throughout the park. This impact is **less than significant**.

Impact HAZ-5: Adverse Effects Related to Wildland Fires.

CPSRA is located in a Local Responsibility Area (LRA) and is in a fire hazard severity zone rated “moderate” (CALFIRE 2007). As described in Chapter 2, Existing Conditions, the San Francisco Fire Department (SFFD) provides fire protection services to CPSRA. The nearest SFFD Station 17 is located two blocks north of Yosemite Slough (at the intersection of Shafter Avenue and Ingalls Street). The estimated response time to the CPSRA vicinity is 1 minute¹ (SFRA 2009:III.O-15).

The project would restore grassland/coastal shrub and coastal native plants on CPSRA, which would be located adjacent to areas planned for urban development (redevelopment area), creating an interface between natural vegetation and developed uses. Compliance with Guideline Coastal Native Zone-4, which requires that the landscape design for CPSRA buffer areas between coastal native zone and adjacent developed areas contain fire resistant plantings and landscape features, which would reduce this impact to a **less-than-significant** level.

5.6.5 Noise (NOISE)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to noise.

Regulatory Setting

The *State of California General Plan Guidelines*, published by the Governor’s OPR, provide guidance for the acceptability of projects within specific CNEL/L_{dn} contours (Governor’s Office of Planning and Research 2003:250).

¹ Response times to CPSRA are based on the estimated travel time to the corner of Hawes Street and Carroll Avenue.

The state of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, and occupational noise, as well as noise insulation.

For the protection of buildings from groundborne vibration, Caltrans recommends a limit of 0.5 in./sec. peak particle velocity (PPV) for new residential buildings and 0.25 in./sec. PPV for older or historically significant buildings. To avoid human annoyance, Caltrans recommends that vibration levels at sensitive land uses be limited to 0.04 in./sec. PPV for transient vibration and 0.01 in./sec. PPV for continuous vibration (Caltrans 2004:27).

Significance Criteria

Implementing the General Plan would result in significant impacts related to noise if it would:

- cause exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies,
- cause exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels,
- cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, or
- cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact Analysis

Impact NOISE-1: Short-Term Noise Levels Related to Project Construction.

Short-term noise from construction would result from implementation of the General Plan. Noise levels would vary at different areas of CPSRA because of the different levels of activity and development phases. Specific projects that would result in constructing new facilities, recreation areas, and the restoration of the tidal marsh in the South Shoreline Basin would undergo additional environmental review before they are implemented. At that time, the level of noise that would be generated by the specific activity would be determined based on the construction equipment required and the sensitive receptors present. If subsequent project-level environmental review results in a determination that anticipated noise levels may exceed state standards or adversely affect sensitive receptors, including wildlife, project-specific mitigation would be adopted and implemented.

Typically, construction noise is exempt from local noise standards as long as construction activities take place during the day and equipment has all manufacturer-recommended noise control devices installed and functioning properly. These regulatory exemptions reflect the local jurisdictions' acknowledgement that construction noise is a necessary part of new development and does not create an unacceptable public nuisance when conducted within the least noise sensitive hours of the day.

Implementation of the General Plan project-specific construction would also result in short-term increases in traffic volumes on the local roadway networks. Increased construction traffic would include trips by worker vehicles, construction equipment, and material delivery vehicles, as well as any potential demolition and excavation hauling trips to and from the site. Trips by workers to and from CPSRA would be expected to be nominal when added to existing traffic volumes. During the noise-sensitive nighttime hours, trips associated with demolition and construction activities would increase existing ambient noise levels because engine noise would be generated during ingress and egress, idling, and revving during materials offloading. Construction noise impacts would be evaluated under project-level analysis during project-specific CEQA documentation, and thus, do not require further discussion at the program level. Short-term construction noise at the program level would be **less than significant**.

Impact NOISE-2: Long-Term Noise Levels Related to Project Operations.

Potential sources of noise associated with future operational activities within CPSRA would include motor vehicle use, park administrative operations, maintenance activities, outdoor events, and active recreational activities. Noise associated with these activities could include vehicle noise (e.g., tires, brakes, engine acceleration); heating, ventilation, and air conditioning system operations; trail maintenance equipment (e.g., hand and power tools); sound amplification of performances and events; and visitor-related noise (e.g., opening and closing of doors, talking, yelling, music playing).

Operational noise related to maintenance, equipment operations, visitors, and associated traffic noise would occur throughout the park. Noise originating from operations and maintenance activities would be minimal and would mainly occur during less-sensitive daytime hours, when CPSRA is open for day use. Noise from mechanical equipment would be mitigated according to the mitigation measures identified during specific project-level review.

Development of Candlestick Meadows would include a nature theater for community events. If subsequent project-level environmental review results in a determination that anticipated noise levels may exceed state standards or adversely affect sensitive

receptors, including wildlife, during events held at the theater, project-specific mitigation would be adopted and implemented.

Noise produced by long-term traffic and operational activities would be attenuated by future park facilities, vegetation, and by existing traffic on local roadways, and would occur mostly during less-sensitive daylight hours. This impact would be **less than significant**.

Impact NOISE-3: Incompatible Land Uses.

Surrounding land uses to the north and west are primarily industrial, and the Baylands—a former rail yard and landfill—is located to the south. Because the surrounding land uses are currently proposed to be redeveloped with a mixed-use community, land uses would transition in the immediate area from industrial to mixed-uses. The proposed mixed-used community would be compatible with CPSRA, and access to the park would be developed with consideration to the new development. As stated above, CPSRA construction and operation activities would take place during less-sensitive daylight hours. If any specific noise conflicts between CPSRA and adjacent land uses are identified during project-level analysis, specific mitigation measures would be required at that time under CEQA. This impact would be **less than significant**.

Impact NOISE-4: Short- and Long-Term Sources of Vibration.

Implementing the General Plan is not expected to include any major sources of vibration. However, construction activities could result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Using the Federal Transit Administration's (FTA) recommended procedure (FTA 2006:12-11 to 12-13) for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels would exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for sensitive uses) within 60 feet of vibration-sensitive receptors. It is not anticipated that sensitive receptors would be located adjacent to active construction projects. If subsequent project-level environmental review results in a determination that anticipated vibration levels may exceed standards or adversely affect sensitive receptors, including wildlife, project-specific mitigation would be adopted and implemented. Thus this impact would be **less than significant**.

5.6.6 Biological Resources (BIO)

Environmental Setting

Refer to Section 2.1.2, Biological Resources, in Chapter 2 of this General Plan for a description of existing conditions related to biological resources.

Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have regulatory authority over federally listed species. Under the ESA, a permit to “take” a listed species is required for any action that may harm an individual of that species. Take is defined under Section 9 of the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (Title 16, Section 1532 of the U.S. Code; Title 50, Section 17.3 of the Code of Federal Regulations). Under federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. If a project would result in take of a federally listed species, the project applicant must either acquire an incidental-take permit under Section 10(a) of the ESA or complete a federal interagency consultation under Section 7 of the ESA before the take occurs. Such a permit typically requires various types of mitigation to compensate for or minimize the take.

Section 404 of the Clean Water Act

Section 404 of the CWA establishes a requirement for a project proponent to obtain a permit from the USACE before engaging in any activity that involves any discharge of dredged or fill material into “waters of the United States,” including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Many surface

waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands.

Section 401 of the Clean Water Act

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the SWRCB.

Magnuson-Stevens Fishery Conservation and Management Act

The Pacific Fishery Management Council (PFMC) has designated San Francisco Bay, the Delta, and Suisun Bay as Essential Fish Habitat (EFH) to protect and enhance habitat for coastal marine fish and macroinvertebrate species that support commercial fisheries such as Pacific salmon. The amended Magnuson-Stevens Fishery Conservation and Management Act, also known as the Sustainable Fisheries Act (Public Law 104-297), requires that all federal agencies consult with the Secretary of Commerce (through NMFS) on activities or proposed activities authorized, funded, or undertaken by that agency that may adversely affect EFH of commercially managed marine and anadromous fish species. The EFH provisions of the Sustainable Fisheries Act are designed to protect fishery habitat from being lost due to disturbance and degradation. The act requires that EFH must be identified for all species federally managed by the Pacific Fishery Management Council, which is responsible for managing commercial fishery resources along the coasts of Washington, Oregon, and California. Three fishery management plans cover species that occur in the project area and designate EFH within the entire Bay-Delta estuary:

- Pacific Groundfish Fishery Management Plan: starry flounder,
- Coastal Pelagic Fishery Management Plan: northern anchovy and Pacific sardine, and
- Pacific Salmon Fishery Management Plan: Chinook salmon.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, implements domestically a series of treaties between the U.S. and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (U.S. Code Title 16, Section 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they

result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds.

State Plans, Policies, Regulations, and Laws

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA) of the California Fish and Game Code, a permit from the CDFW is required for projects that could result in the “take” of a species which is state listed as threatened or endangered (i.e., species listed under CESA), except that plants may be taken without a permit pursuant to the terms of the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.). Pursuant to Section 2080, take of a listed species is prohibited without an incidental-take permit. Take of a species under CESA is defined as an activity that would directly or indirectly kill an individual of the species. Unlike the definition in the federal ESA, the CESA definition of take does not include harm or harass. As a result, the threshold for take under CESA is generally considered higher than under ESA.

California Fish and Game Code Section 1600 et al.—Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife or fishery resources are subject to regulation by CDFW under Section 1600 et al. of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW: substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, “waters of the state” fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that discharge waste to

wetlands or waters of the state must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

More recently, the appropriate RWQCB has also generally taken jurisdiction over “waters of the state” that are not subject to USACE jurisdiction under the CWA, in cases where USACE has determined that certain features do not fall under its jurisdiction. Mitigation requiring no net loss of wetland functions and values of waters of the state is typically required.

Regional and Local Plans, Policies, Regulations, and Laws

San Francisco Bay Conservation and Development Commission

San Francisco Bay is within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC). BCDC is composed of appointees from local government and state and federal agencies, and is responsible for regulating a number of activities within and adjacent to the Bay. Any dredging or disposal activity in the Bay, marshes, and some creeks requires a permit from BCDC; most work (including grading) on land within 100 feet of the Bay shoreline also requires a permit.

Significance Criteria

Implementing the proposed General Plan would have a significant impact on biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected wetlands (e.g., marsh, vernal pool, coastal) as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

CPSRA does not include migratory wildlife corridors or native wildlife nursery sites due to the urban nature of the park. Therefore, this impact is not discussed further in this EIR. The proposed General Plan would not conflict with any local policies or ordinances protecting biological resources because the project would restore, create, and enhance habitat and provide educational and interpretive resources, promoting the protection of biological resources. Furthermore, CPSRA is state-owned property and as such is not subject to local policies and ordinances. CPSRA is not located within the jurisdiction of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, these topics are not addressed further in this EIR.

Impact Analysis

Impact BIO-1: Adverse Effects on Special-Status Plants.

Based on a CNDDDB database search, literature review, and a field visit to confirm the habitats present in the planning area, 16 special-status plant species were determined to have potential to occur in CPSRA based on the presence of suitable habitat. These species are associated with valley and foothill grassland, coastal scrub, coastal salt marsh, and freshwater seasonal wetland. However, as noted in Table A-1, Special-Status Plant Species With Potential to Occur in the Vicinity of CPSRA, in Appendix A of this General Plan, none of these species are likely to occur in the park due to the disturbed nature of the site, the fact that the park is located on fill material placed in the bay, and the absence of the unique environmental conditions such as native soils, specific salinity and moisture regimes that typically support these species. Furthermore, past surveys performed within and around CPSRA in support of other projects did not document the presence of any special-status plants. Therefore, special-status plants are assumed to be absent from CPSRA at this time. While it is not impossible that special-status plants may become established at CPSRA over the lifetime of the General Plan, it is unlikely that they would become established in significant numbers that would subsequently be subject to disturbance. Because the site currently does not support special-status plants, and because it is unlikely that over the lifetime of the General Plan extensive populations of special-status plants would become established in the park and subsequently be subject to adverse effects, implementation of the proposed General Plan would result in **less-than-significant** impacts to special-status plants.

Impact BIO-2: Adverse Effects on Special-Status Wildlife and Fish Species.

CPSRA contains potentially suitable habitat for 25 special-status wildlife species. Table A-2, Special-Status Wildlife Species With Potential to Occur in the Vicinity of CPSRA in

Appendix A includes information on the habitat requirements and distribution of these species. Special-status wildlife species known to occur, or that could occur, at CPSRA include short-eared owl, western burrowing owl, northern harrier, white-tailed kite, saltmarsh common yellowthroat, and California brown pelican. None of these species are known to nest on the property due to the disturbed nature of the site and its urban setting; however, it is possible they may in the future. Similarly, CPSRA does not provide important foraging habitat for any special-status wildlife species. Construction of visitor facilities and anticipated increased visitor use of the site following implementation of the General Plan is not expected to substantially affect any special-status wildlife species, with implementation of the guidelines included in Goal Wildlife-1.

Special-status fish or wildlife species that currently utilize aquatic habitat adjacent to the park also would not be adversely affected because limited development is proposed and would not interfere with the movement of species in the bay. As described in Section 5.6.8, construction activities have the potential to temporarily impair water quality, and associated aquatic habitats and organisms, as a result of discharge of disturbed and eroded soil, petroleum products, or construction-related wastes (e.g., cement and solvents) into adjacent waters, with potential adverse effects to fish and other aquatic organisms. Implementation of Guideline Water Quality-4 along with implementation of a Stormwater Prevention Pollution Plan and compliance with a National Pollutant Discharge Elimination System permit would avoid or minimize these potential water quality impacts from construction activities.

Additional visitor use of near shore and open water areas would be similar to existing used and would not adversely affect aquatic habitats and/or species using the bay. Generally, wildlife habitat at CPSRA is expected to be improved by implementation of the General Plan. General Plan Goal Wildlife-1 aims to maintain, protect and/or enhance wildlife habitat at CPSRA. Associated Guideline Wildlife-2 seeks to maximize connectivity between vegetation communities in the park to facilitate movement of wildlife. Implementation of Guideline Wildlife-3 would create vegetative buffers between trails and habitat areas to minimize disturbance between wildlife and visitors. In addition, implementation of Guideline Wildlife-5 would monitor and control non-native pests to protect wildlife species. With implementation of these guidelines, wildlife habitat, including habitat for special-status species, should improve with implementation of the General Plan. Impacts on special-status wildlife resulting from implementation of the General Plan would be **less than significant**.

Impact BIO-3: Loss of Special-Status Wildlife and Fish Species.

CPSRA does not contain any riparian habitat, but two sensitive habitat types, coastal salt marsh and freshwater seasonal wetland, are present.

The coastal salt marsh and the freshwater seasonal wetland are located in the Yosemite Slough area, and coastal salt marsh is also found in the South Basin Shoreline, east of the slough. The Yosemite Slough Restoration Project stems from CPSRA's first general plan and has already been permitted. Construction of Phase I (north of the slough) began in 2011, and detailed design of Phase II (south of the slough) will occur in the future. The proposed General Plan includes elements that would complement and support the Yosemite Slough Restoration project, including restoration of the coastal salt marsh and freshwater seasonal wetland of the Yosemite Slough and facilities at the South Basin Shoreline that would provide low-impact recreation opportunities (e.g., trail use, wildlife viewing, picnicking) and nature-based education and interpretation. The tidal and freshwater wetlands would be restored, protected, and enhanced through implementation of Guidelines Vegetation-6 and Vegetation-8, and Guideline Vegetation-7, which would require an adaptive management approach to the creation and enhancement of tidal wetlands. With implementation of these guidelines, the impact to sensitive natural communities would be **less than significant**.

Impact BIO-4: Impacts to Wetlands and Other Waters of the United States.

The General Plan includes facilities and improvements that could potentially affect the shoreline and wetlands and other waters of the U.S., which are subject to jurisdiction of the USACE, CDFW, and BCDC. These proposed facilities and improvements include new fishing and viewing piers, boat launching facilities, windsurfer launching facilities, and beach and coastal habitat enhancements.

Impacts to the bed and banks of tidal marsh and wetland habitat would be considered significant. In addition, BCDC's jurisdiction includes all marshlands up to the 5-foot contour, and extends 100-feet inland from the 5-foot contour. State Parks would obtain necessary permits prior to implementing park improvements that may affect wetlands or other waters of the U.S. In addition, State Parks would coordinate with CDFW regarding the need for a Streambed Alteration Agreement (SAA) as needed to obtain an SAA and abide by any required mitigation requirements. It is also anticipated that USACE would require a Section 404 permit under the CWA and that a BCDC permit would be necessary as well. Other permits and agency coordination, including the potential for consultations under the ESA and/or Magnuson-Stevens Act, would be determined at the time of project-specific environmental documentation. Thus, impacts related to streambed alteration and any coastal salt marsh and freshwater seasonal wetland areas would be **less than significant**.

5.6.7 Cultural Resources (CUL)

Environmental Setting

Refer to Section 2.1.3, Cultural Resources, in Chapter 2 of this General Plan for a description of existing conditions related to cultural resources.

Regulatory Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. The following discussion summarizes the pertinent cultural resource regulatory framework.

Federal Laws

National Historic Preservation Act

The CPSRA General Plan would be subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) because it requires a Section 404 permit from USACE, pursuant to the CWA. Section 106 of the NHPA, as amended, and its implementing regulations found in 36 CFR Part 800, require federal agencies to identify historic properties that may be affected by actions involving federal land, funds, approval or permitting. If a resource is determined to be a historic property, Section 106 of the NHPA requires that effects of a proposed project on the resource be determined. If a historic property would be adversely affected by undertaking a project, then prudent and feasible measures to avoid or reduce adverse impacts must be taken. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to project implementation.

National Register of Historic Places

The National Register of Historic Places (NRHP) was authorized by the NHPA and serves as the nation's official list of cultural resources worthy of preservation. Moreover, the NRHP forms a core element of a coordinated national effort to identify, evaluate, and protect resources that meet the criteria of historic properties, as defined below.

The criteria for listing on the NRHP, defined in 36 CFR 60.4, are as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history;
- B. That are associated with the lives of persons significant in our past;
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important to prehistory or history.

In addition to meeting at least one of the criteria listed above, a resource must also retain enough integrity to enable it to convey its historic significance. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity. These seven elements of integrity are: location, design, setting, materials, workmanship, feeling, and association. To retain integrity, a property will always possess several, and usually most, of these aspects.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (criteria A, B, and C), the significance of most prehistoric and some historic-period archaeological properties are usually assessed under criterion D (above). This criterion stresses the importance of the information contained in an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event.

State Regulations

California Environmental Quality Act and Public Resource Code

CEQA requires that, for projects financed by, or requiring the discretionary approval of public agencies in California, the effects that a project has on historical and unique archaeological resources must be considered (PRC Section 21083.2). Historical resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance (PRC Section 50201).

The State CEQA Guidelines (Section 15064.5) define three cases in which a property may qualify as a historical resource for the purpose of CEQA review (A through C):

- A. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR). The CRHR is a statewide list of Historical Resources with qualities assessed significant in the context of the state's heritage. The CRHR functions as an authoritative guide that is intended to be used by state and local

agencies to indicate types of cultural resources that require protection, to a prudent and feasible extent, from project-related substantial adverse changes. Properties that are listed in the NRHP, or are eligible for listing, are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

Section 5024.1 defines eligibility requirements and states that a resource may be eligible for inclusion in the CRHR if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

As with the NRHP, properties must retain integrity to be eligible for listing on the CRHR.

- B. The resource is included in a local register of historic resources, as defined in section 5020.1(k) of the PRC, or is identified as significant in a historical resources survey that meets the requirements of section 5024.1(g) of the PRC (unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant).
- C. The lead agency determines that the resource may be a historical resource as defined in PRC section 5020.1(j), 5024.1, or significant as supported by substantial evidence in light of the whole record.

PRC Section 21083.2 governs the treatment of unique archaeological resources, which must be afforded consideration in the assessment of impacts under CEQA. A unique archaeological resource is defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated" as meeting any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

As defined by the California State Health and Safety Code, Section 7050.5, and PRC Section 5097.98, the inadvertent discovery of human remains requires cessation of project work relative to the find until an assessment of the remains, including determination of origin and deposition, is completed by the County Coroner, in consultation with the Native American Heritage Commission (NAHC) and/or appropriate Tribal representative(s). In the event of inadvertent discoveries, an ongoing program of Native American consultation provides an opportunity for such groups to participate in the identification, evaluation, and mitigation of impacts to human remains and funerary objects.

When a project will affect state-owned historical resources, as described in PRC Section 5024, and the lead agency is a state agency, the lead agency will consult with the California SHPO prior to approval of a proposed project (14 California Code of Regulations [CCR] Section 15064.5(b) (5)).

Executive Order W-26-92

As of June 30, 2007, State Parks controls and administers 258 classified units and 20 major unclassified properties for a total of 278 areas, which collectively contain thousands of historic resources. Executive Order W-26-92 requires all state agencies, including State Parks, in furtherance of the purposes and policies of the state's environmental protection laws and historic resource preservation laws, to the extent prudent and feasible within existing budget and personnel resources, to preserve and maintain the significant heritage (cultural and historical) resources of the state. Each state agency, including State Parks, is directed to:

- Administer the cultural and historic properties under its control in a spirit of stewardship and trusteeship for future generations;
- Initiate measures necessary to direct its policies, plans, and programs in such a way that state-owned sites, structures, and objects of historical, architectural, or archeological significance are preserved, restored, and maintained for the inspiration and benefit of the people;
- Ensure the protection of significant heritage resources are given full consideration in all of its land use and capital outlay decisions; and
- Institute procedures to ensure that state plans and programs that contribute to the preservation and enhancement of significant non-state owned heritage resources in consultation with OHP (Executive Order W-26-92 Section 1).

Significance Criteria

Implementing the General Plan would have a significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of historical resources as defined in State CEQA Guidelines Section 15064.5;
- cause a substantial adverse change in the significance of an archaeological resource
- pursuant to State CEQA Guidelines Section 15064.5;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- disturb any human remains, including those interred outside of formal cemeteries.

Historical Resources

Section 15064.5 of the State CEQA Guidelines states that a project would result in a significant impact if it would cause a substantial adverse change in the significance of a historical resource based on the following criteria:

- (b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.
 - (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration in the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired.
 - (2) The significance of a historical resource is materially impaired when a project:
 - (A) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources; or
 - (B) Demolishes or materially alters in an adverse manner those physical characteristics [of a historical resource] that account for its inclusion in a local register of historical resources (pursuant to section 5021.1(k) of the PRC), or its identification in a historical resources survey meeting the criteria in section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance

and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

- (3) Generally, a project that follows the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Weeks and Grimmer 1995), shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Archaeological Resources

CEQA protects archeological resources in the following manner:

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is a historical resource (Section 15064.5[a] of the State CEQA Guidelines).
- If a lead agency determines that the archaeological site is a historical resource, the lead agency shall refer to the provisions of Section 21084.1 of the PRC and Section 15126.4 of the State CEQA Guidelines, and the limits contained in Section 21083.2 of the PRC do not apply.
- If an archaeological site does not meet the criteria defined in Subsection (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of Section 21083.2.

Impact Analysis

Impact CUL-1: Adverse Effect on Significant Prehistoric and Historic-Era Resources.

Although CPSRA was created almost entirely on fill soils that were placed in the middle of the 20th century, several Native American shellmounds are known to exist in the park vicinity. In addition, the mudflats adjacent to CPSRA contain shipwrecks. It is possible that additional resources from prehistoric and historic eras exist beneath the fill soils that cover the site. Based on the Cultural Resources Guidelines provided in Chapter 4, a phased identification process would be implemented as part of the design process for area-specific projects. Specifically, Goal Cultural Resources-1 and associated Guidelines Cultural Resources-1 through Cultural Resources-5 require record reviews and necessary fieldwork, designing and planning to avoid any identified cultural resources, consultation with a qualified cultural resource professional to identify appropriate measures where disturbance to resources are unavoidable, monitoring during excavation activities, consulting with the Native American community for discovered resources, and maintaining sensitivity of any Native American resources.

Mitigation measures for potentially significant impacts on cultural resources at CPSRA would be implemented, as required, according to procedures identified in Section 106 of the NHPA (36 CFR 800.6, and PRC 5024.5(b) and its implementing regulations. CEQA requires lead agencies to adopt feasible mitigation measures for significant impacts on historic resources and unique archeological resources. Mitigation measures would be developed through a consultation process involving the federal agencies, SHPO, state agencies, and interested members of the public. Mitigation measures also would be required for potentially significant impacts on cultural resources caused by implementation of the CPSRA General Plan. State CEQA Guidelines (15126.4) provide guidance regarding the preference for strategies to mitigate impacts on historic resources. The State CEQA Guidelines indicate that preservation in place is the preferred approach and enumerate other mitigation options. Limits on potential costs of mitigating unique archeological resources are presented in PRC 21083.2.

Cultural resources are fragile, finite, and nonrenewable. Any type of physical damage results in a permanent loss of information. The importance of any given resource is closely related to its structural or depositional integrity. Once a site is disturbed, it may be stabilized and protected from further deterioration, but it cannot be restored to its original condition. Even the application of data recovery techniques involves some loss because data recovery is necessarily selective. Although the construction or development phase of a proposed project may be of relatively short duration, adverse effects on NRHP-eligible or important cultural resources could be long term and permanent. The application of data recovery techniques can recover physical objects and mitigate the loss of data, but the site is nonetheless lost to posterity and future in-situ research. Cultural resources that are affected during the implementation of any alternative would be lost for posterity. Data recovery techniques ameliorate this loss somewhat. Cultural resources cannot be replaced or reproduced once they are lost, regardless of mitigation activities.

Implementing Goal Cultural Resources-1 and associated Guidelines Cultural Resources-1 through Cultural Resources-4 would protect cultural resources, including undiscovered resources at CPSRA, and reduce any potential impacts caused by implementation of the CPSRA General Plan to **less-than-significant** levels.

Impact CUL-2: Adverse Effect on Unique Paleontological Resources.

Bay Mud deposits were created by fluctuating sea levels and erosion-deposited estuarine sediments from the Holocene and Pleistocene periods (0 to 1.8 million years ago). Young Bay mud may potentially contain local occurrences of shell fragments and plant remains (State Parks 1978, SFRA, and SFPD 2009). The presence of Bay mud under the artificial fill throughout the Candlestick Point and South Basin area indicates

the potential for paleontological resources at CPSRA. Implementing Goal Cultural Resources-1 and associated Guideline Cultural Resources-5 would protect paleontological resources, and reduce any potential impacts caused by implementation of the CPSRA General Plan to **less-than-significant** levels.

5.6.8 Aesthetic Resources (AES)

Environmental Setting

Refer to Section 2.1.4, Aesthetic Resources and the lighting discussion in Section 2.3.1, Utilities, in Chapter 2 of this General Plan for a description of existing conditions related to aesthetic resources and lighting, respectively.

Regulatory Setting

Refer to Section 2.6, Planning Influences, of Chapter 2 of this General Plan for a description of the following plans relevant to the proposed project:

- Public Resources Code
- Bay Conservation and Development Commission, San Francisco Bay Plan
- Bay Conservation and Development Commission, Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay

Significance Criteria

Implementing the General Plan would have a significant impact on aesthetics if it would:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The project site is not within or near a state scenic highway (Caltrans 2011); therefore, this topic is not addressed further in this EIR.

Impact Analysis

Impact AES-1: Adverse Effects on a Scenic Vista.

Implementation of the General Plan would result in the development of new facilities and infrastructure at CPSRA that would be visible to park visitors and viewers from San Francisco Bay. Currently, due to the configuration of the property and the extent of

shoreline, few areas within CPSRA contain obstructed views of the open Bay. As stated in Chapter 4 of this General Plan, CPSRA includes seven distinct geographic areas, within which a mix of activities and facilities would occur with implementation of the General Plan. Potential new facilities in these seven geographic areas would include, but would not be limited to: information kiosks, interpretive signage, art, interpretive pavilions, gathering areas, parking areas, trails, boardwalks, an overlook, outdoor classrooms, interpretive center and plaza, piers, restrooms, picnic areas, nature theater, boat landing, and concession stands. All six geographic areas of CPSRA would continue to maintain views of the Bay, with designated and unofficial viewing areas. New facilities would be developed in accordance with Guideline Aesthetic Resources-8, which requires that new facilities be located to minimize impacts on views from key viewpoints, particularly views of San Francisco Bay. In addition, implementation of this guideline would incorporate the use of vegetative screening, land contouring, and other methods to minimize visual impacts from structures and outdoor facilities. Furthermore, implementation of the General Plan would increase public access and enhance opportunities for the public to experience newly created scenic vistas from CPSRA. Therefore, with implementation of Guideline Aesthetic Resources-8, impacts on scenic vistas would be **less than significant**.

Impact AES-2: Degradation of the Existing Visual Character or Quality of the Site and Its Surroundings.

Implementation of the General Plan would alter the current visual character of the site and surrounding area. Adverse impacts may result from the construction of visually incompatible structures within or around CPSRA. As noted in Section 2.1.4, Aesthetic Resources, in Chapter 2 of this General Plan, none of the buildings located in the vicinity of CPSRA are identified as scenic resources or features of the built environment that contribute to a scenic public setting.

Implementation of the General Plan may result in the development of structures that are not compatible with the surrounding natural and urban environment. In particular, the CPSRA visitor information center would be developed outside of the park area in the adjacent neighborhood. Guideline Aesthetic Resources-1 aims to extend the design language of the surrounding urban environment into CPSRA and Guideline Aesthetic Resources-2 aims to use a palette of materials and designs that reflects the more refined nature of the urban environment, while providing a transition between the urban and natural areas. Implementation of Guideline Park Branding-3 would enhance CPSRA's visual character with a design framework and feature elements that relate to the historic, environmental, and cultural aspects specific to the project site; through implementation of this guideline, more detailed design guidelines would be created to extend a cohesive design character throughout the park and tie it into the surrounding

urban areas. Within the park, Guideline Aesthetic Resources-6 would require the use of natural materials and a native-based plant palette in certain planning zones for continuity of the visual character within the site. Design and development of facilities within CPSRA would be compatible with the surrounding city streets and parks through coordination with the City and County of San Francisco, as specified in Guideline Aesthetic Resources-3.

Overall, implementation of the proposed General Plan would enhance the visual character of the park and surrounding area. Impacts related to changes to visual character would be **less than significant** with implementation of the guidelines identified above.

Impact AES-3: Light and Glare.

Implementation of the General Plan would introduce night lighting as security lighting on building exteriors and in parking areas, and potentially along the Bay Trail and other trails/boardwalks. In addition, night lighting would be used for special events held in the evening hours. Light and glare from CPSRA would potentially have an adverse effect on nearby existing and future residential areas, in particular along Harney Way and in the Alice Griffith Public Housing project. New parking lots located throughout CPSRA would potentially be a source of daytime glare from cars and nighttime glare from lighting in the parking lots.

However, the General Plan includes specific guidelines to minimize adverse effects from light and glare. Specifically, Guideline Aesthetic Resources-5 calls for lighting to be directed downward to minimize light spillage to protect dark night skies. Guideline Visitor Safety-7 calls for the use of design strategies to increase natural surveillance, including lighting. Furthermore, Guideline Energy-1 aims to ensure the lighting is kept to the levels needed to address night use and security concerns. Together, these guidelines aim to ensure that exterior lights would be placed to minimize glare, obtrusive light spillage, and light trespass, and to provide minimum acceptable levels of lighting. Implementation of these guidelines combined with thoughtful placement of parking and other facilities would maintain potential impacts resulting from light and glare at **less-than-significant** levels.

5.6.9 Utilities and Service Systems (UTIL)

Environmental Setting

Refer to Section 2.3.1, Utilities and Services, in Chapter 2 of this General Plan for a description of existing conditions related to utilities and service systems.

Regulatory Setting

No federal, state, regional, or local plans, regulations, or laws related to utilities apply to the General Plan.

Significance Criteria

Implementing the General Plan would have a significant impact related to public services and utilities if it would:

- exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board;
- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements;
- result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- not comply with federal, state, and local statutes and regulations related to solid waste.

Impact Analysis

Impact UTIL-1: Increase Demand on Utilities and Service Systems.

Potable Water, Wastewater Collection, and Storm Drainage

Implementation of the General Plan would require extension, upgrade, and modification of some service infrastructure on the site to serve new facilities such as restrooms and landscape irrigation systems. It is not anticipated that the General Plan would result in a substantial increase in demand for potable water, wastewater collection or treatment capacity, or storm drainage management, and all facilities would be designed and managed per applicable standards. However, specific requirements for utilities would be determined at the time that project-level designs are developed. Implementation of Goal Energy-1, Goal Water-1, and Goal Waste-1, along with their supporting guidelines, as well as Guideline Wildlife-4, would provide for energy efficiency, implement

conservation measures to minimize water use at CPSRA, and minimize generation of solid waste. Therefore, the General Plan would have a less-than-significant impact on utility demand and on service systems.

5.6.10 Public Services (PS)

Environmental Setting

Refer to Section 2.3.2, Security and Emergency Services, in Chapter 2 of this General Plan for a description of existing conditions related to public services.

Regulatory Setting

No federal, state, regional, or local plans, regulations, or laws related to public services apply to the proposed General Plan.

Significance Criteria

Implementing the General Plan would have a significant impact related to public services if it would:

- cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times, or other performance objectives for any of the public services, including police or fire services or other public facilities.

The proposed General Plan would not involve construction of housing, and would not create a demand for additional school capacity or for additional parks; therefore these topics are not discussed further.

Impact Analysis

Impact PS-1: Adverse Effects on Police and Fire Services.

Implementation of the General Plan, which would improve and expand recreation opportunities at CPSRA, would result in an increase in visitors to the park. It is not anticipated that the increase in visitors due solely to park improvements would result in a substantial increase in demand for public safety services. Visitor Safety Goals-1 and -3 address public safety. Supporting guidelines (Guidelines Visitor Safety-1 through Visitor Safety-5 and Guidelines Visitor Safety-10 through Visitor Safety-12) give high priority to public safety and require engagement and coordination with local law enforcement agencies, positive outreach to adjacent neighborhoods, and safety planning for special events, among other measures. In particular, Goal Visitor Safety-3

requires that the CPSRA safety program be developed to respond to changing neighborhood conditions, and its supporting Guidelines Visitor Safety-10 through Visitor Safety-12 ensure sufficient staffing to implement the safety program, require engagement with surrounding neighborhoods regarding safety, and require nighttime security lighting.

With implementation of these goals and guidelines, impacts to public services would be **less than significant**.

5.6.11 Transportation and Traffic (TRANS)

Environmental Setting

Refer to Section 2.4, Transportation and Circulation, in Chapter 2 of this General Plan for a description of existing conditions related transportation and circulation.

Regulatory Setting

State Parks is not subject to local land use regulations, however, State Parks will design and operate CPSRA in a manner that is compatible with the surrounding area. The following local land use plans guide transportation and circulation in the area surrounding CPSRA.

San Francisco General Plan

The Transportation Element of the San Francisco General Plan is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element contains objectives and policies that are directly pertinent to consideration of the project.

The following objectives and policies are relevant to the CPSRA General Plan:

- Encourage the use of transit and other alternative modes of travel to the private automobile through the positioning of building entrances and convenient location of support facilities that prioritizes access from these modes (Transportation Element Objective 14, Policy 147).
- Provide secure and convenient parking facilities for bicycles (Transportation Element Objective 28).
- Improve the city's pedestrian circulation system to provide for efficient, pleasant, and safe movement (Transportation Element Objective 23).

San Francisco Bay Trail Plan

The San Francisco Bay Trail Project (Bay Trail) is an initiative led by ABAG to construct a 500-mile loop trail for hiking and bicycling around the perimeter of San Francisco Bay. Three Bay Trail segments would cross CPSRA land—one in the short-term (within 5 years) and two in the mid-term (6 to 10 years). Refer to Section 2.6, Planning Influences, in Chapter 2 for a more detailed description of the San Francisco Bay Trail Plan.

Significance Criteria

The proposed project would have a significant impact related to transportation and circulation if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation, or cause a substantial increase in transit demand that cannot be accommodated by existing or proposed transit capacity or alternative travel modes.

Impact Analysis

Impact TRANS-1: Cause an Increase in Traffic that is Substantial in Relation to the Existing Traffic Load and Capacity of the Street System.

Implementation of the General Plan would result in a decrease in the size of CPSRA; however it would also provide improved recreational facilities, which would attract additional visitors to CPSRA. Annual visitation for CPSRA was 193,397 in fiscal year 2008/2009 (CSPS 2010). It is assumed that visitation will expand substantially above current use levels due primarily to the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project, which will construct over 10,500 residential units. This development also includes a number of improvements that will increase access to the park via alternative transportation modes. The new street grid will create numerous opportunities for pedestrian access, and new bike paths and on-street bike lanes will designate safe bike routes to the park. The specific alignments of the new bike routes remain to be determined, and State Parks is coordinating with the City and County of San Francisco regarding their potential location within CPSRA. Expanded bus service

will circulate through the neighborhood, and a new bus rapid transit (BRT) route along portions of the park will stop near Hermit's Cove and Yosemite Slough.

With the improved and expanded facilities on the site, it is anticipated that implementation of the General Plan would result in some increase in automobile traffic in the area. As described in Section 2.4, Transportation and Circulation, during weekday a.m. and p.m. peak hours, most intersections in the vicinity of CPSRA operate at acceptable levels (LOS D or better) (SFRA 2009: III.D-1). According to traffic projections prepared for the Candlestick Point-Hunters Point Shipyard Phase II Project, during weekday a.m. and p.m. peak hours, the park would generate one and four vehicle trips, respectively. A total of 127 vehicle trips per day would occur on weekdays. During the Sunday a.m. peak hour, 198 vehicle trips would occur (Womeldorff 2011). Peak hour traffic associated with CPSRA would not necessarily coincide with peak hour traffic on streets adjacent to CPSRA; therefore, traffic associated with the General Plan improvements is not expected to result in a substantial increase in traffic congestion at intersections. Additionally, the General Plan provides goals and supporting guidelines that promote increased connectivity between CPSRA and the surrounding neighborhood (Goal Integration-1); promote efficient access and circulation throughout the park for a variety of travel modes (Goal Access-1); require coordination with local and regional transportation agencies and organizations to provide multi-modal access to the park (Goal Multi-Modal-1); create safe, quality environments to promote walking and biking to CPSRA (Goal Multi-Modal-2); and provide sufficient parking to meet the needs of local, regional and statewide users (Goal Parking-1).

CPSRA is accessible by a variety of transportation modes, and the General Plan will further promote connectivity with surrounding neighborhoods and promote access to CPSRA by alternate transportation modes. For these reasons, it is not anticipated that implementation of the proposed improvements would cause a substantial increase in traffic volumes on roadways or a substantial decrease of intersection LOS in the vicinity of CPSRA when compared to existing traffic loads on the roadways. This impact would be **less than significant**.

Impact TRANS-2: Substantially Increase Hazards Due to a Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses.

CPSRA would not construct new roadways external to the project, but would provide internal circulation for pedestrians and bicycles and parking for automobiles within the boundaries of the park. These facilities would be designed and constructed according to accepted design standards. The General Plan contains goals and supporting guidelines that provide for universal access to park programs and facilities such as buildings, restrooms, trails, parking, and other common use facilities, including recreational areas.

General Plan Goal Access-1 and supporting guidelines provide for efficient access and circulation throughout the park and development of an access and circulation plan that would accommodate the anticipated increase in traffic from adjacent neighborhoods, minimize trail user conflicts, and require coordination with the City and County of San Francisco, Caltrans, and other relevant public agencies regarding the management of vehicle, bicycle, and pedestrian traffic. For these reasons, it is not anticipated that implementation of the General Plan would result in a substantial increase in hazards due to project design or incompatible uses. This impact would be **less than significant**.

Impact TRANS-3: Conflict with adopted Policies, Plans, or Programs Supporting Alternative Transportation, or Cause a Substantial Increase in Transit Demand That Cannot Be Accommodated by Existing or Proposed Transit Capacity or Alternative Travel Modes.

The vicinity of CPSRA is served by a variety of public transit modes; however, despite its urban location, bus service to the park is limited, and few safe walking and biking routes exist from the surrounding neighborhood (see Chapter 3, Issues and Analysis). It is assumed that increased visitation above current levels would result primarily from the planned Candlestick Point-Hunters Point Shipyard Phase II Project. This development includes a number of improvements that will increase access to the park via alternative transportation modes. The new street grid will create numerous opportunities for pedestrian access, and new bike paths and on-street bike lanes will designate safe bike routes to the park. Goal Multi-Modal-1 provides for State Parks to work with local and regional transportation agencies and organizations to provide multi-modal access to the park. Supporting guidelines require State Parks to coordinate with the City and County of San Francisco regarding alignments of new pedestrian and bicycle routes, connection with new and planned alternative transportation modes, and integrating the new Class I bikeway with access points to the park.

Goal Multi-Modal-1 and Goal Multi-Modal-2, along with the supporting guidelines (Guidelines Multi-Modal-1 through Multi-Modal-9), would also be consistent with San Francisco General Plan's Transportation Element. These goals are consistent with Transportation Element Objective 23, to improve San Francisco's pedestrian circulation system to provide for efficient, pleasant, and safe movement, and Transportation Element Objective 147, to encourage the use of transit and other alternative modes of travel and to conveniently locate support facilities that prioritize access from these modes.

Therefore, it is not anticipated that implementation of the General Plan would result in a substantial increase in transit demand that cannot be accommodated by planned transit capacity or alternative travel modes or that would conflict with adopted policies, plans,

or programs supporting alternative transportation. This impact would be **less than significant**.

5.6.12 Air Quality (AQ)

Environmental Setting

Existing Air Quality

CPSRA is located in the City and County of San Francisco, within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB also comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, and the southern half of Sonoma County. The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transportation and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources. Each factor is discussed separately below.

Climate, Topography, and Meteorology

The dominant features of the SFBAAB are the mountains of the Coast Range and proximity to San Francisco Bay and the Pacific Ocean. The Coast Range runs from north to south and creates a barrier to moisture and wind for areas on the east side of the crest.

Climate within the SFBAAB varies depending on proximity to the Pacific Coast. Inland climate in the SFBAAB includes hot, dry summers and cool, wet winters. Coastal SFBAAB climate includes cool summers and rainy winters. Winds vary seasonally with predominant winds from north to northwest in the summer and from the south in the winter.

The predominant wind direction and speed, measured at the closest meteorological station to CPSRA—San Francisco International Airport in South San Francisco, —is from the west at 10 miles per hour (mph) (WRCC 2011).

Climate data from South San Francisco covering the period of July 1996 through December 2008 (WRCC 2011) indicate the following:

- Average maximum monthly temperatures range from 56°F in January to 73°F in September

- Average minimum monthly temperatures range from 45°F in January to 57°F in August
- Average annual rainfall is approximately 21 inches, occurring mostly from November through April

Criteria Air Pollutants

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (PM₁₀ and PM_{2.5}), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health, and extensive health effects criteria documents are available, they are commonly referred to as “criteria air pollutants.” This section provides a brief description of the main criteria air pollutants of concern—ozone, PM₁₀, and PM_{2.5}.

Ozone

Ground-level ozone, often referred to as smog, is not emitted directly, but rather, forms in the atmosphere through complex chemical reactions between nitrogen oxides (NO_x) and reactive organic gases (ROG) in the presence of sunlight. The principal sources of NO_x and ROG, often termed ozone precursors, are combustion processes (including automobiles) and evaporation of solvents, paints, and fuels. Exposure to ozone can cause eye irritation, aggravate respiratory diseases, and damage lung tissue, as well as damage vegetation and reduce visibility. Emissions of ROG and NO_x have decreased in the SFBAAB since 1975, and are projected to continue declining through 2020, due to controls on emissions from motor vehicles, oil refineries, and industrial coating and solvent operations (SFRA and SFPD 2009).

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter includes a wide range of solid or liquid particles, including smoke, dust, aerosols, and metallic oxides. The many sources of particulate matter emissions include combustion, industrial processes, construction, and motor vehicles. Road-suspended dust generates the majority of motor vehicle particulate matter emissions, although emissions also result from tailpipe and tire-wear. Wood burning in fireplaces and stoves is a significant source of particulate matter, especially during cold, stagnant wintertime episodes, when levels are highest. Health effects of particulate matter depend on the type and size of the particle, among other factors. Research has demonstrated a correlation between respirable particulate matter (PM₁₀) concentrations and increased mortality rates. Elevated levels of PM₁₀ also aggravate chronic respiratory illness, such as bronchitis and asthma. Fine particulate matter (PM_{2.5}) is a concern because it can bypass the body’s natural filtration system more easily than larger particles and can lodge deep in the lungs.

Both the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) use monitoring data to designate areas as attainment or nonattainment for ambient air quality standards. Both CARB and EPA have established ambient air quality standards for various pollutants that are considered the maximum concentration levels to maintain healthy air quality for the general public. Table 5-1 presents the California and federal ambient air quality standards, which are referred to as the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS), respectively, and the attainment status of the SFBAAB (SFRA and SFPD 2009). The purpose of these designations is to identify those areas with air quality problems and initiate planning efforts for improvement. SFBAAB is currently designated nonattainment for the state PM_{10} , state and federal $PM_{2.5}$, and state and federal ozone ambient air quality standards (AAQS). The SFBAAB is either in attainment or unclassified for all remaining state and federal AAQS (ARB 2011a).

The SFBAAB is in attainment for all state and federal standards except those for ozone, PM_{10} , and $PM_{2.5}$. Ozone and $PM_{2.5}$ levels exceed both state and federal standards, while PM_{10} exceeds only California's standards. The Bay Area Air Quality Management District (BAAQMD) regulates stationary sources of air pollution in the SFBAAB and operates numerous air quality monitoring stations throughout the Bay Area. Ozone, PM_{10} , and $PM_{2.5}$ concentrations are measured at the Arkansas Street, San Francisco station. Other criteria pollutants are not currently monitored because of their attainment status. In general, the ambient air quality measurements from this station are representative of the air quality in the project area. As shown below in Table 5-2, the state and federal ozone standards were exceeded in each year from 2005 to 2009. In addition, the PM_{10} and $PM_{2.5}$ standards were exceeded in nearly every year during the same period. As discussed previously, the SFBAAB is designated as nonattainment for ozone, PM_{10} , and $PM_{2.5}$, and therefore, BAAQMD's air quality plans are focused on measures and programs to reduce these pollutants and their precursors (i.e., ROG and NO_x).

Table 5-1: Pollution Standards and Attainment in the SFBAAB

Pollutant	Averaging Time	State Standard (Attainment)	Federal Standard (Attainment)
Ozone	1-hr 8-hr	0.09 ppm (N) 0.070 ppm (N)	None 0.075 ppm (N)
Carbon Monoxide	1-hr 8-hr	20 ppm (A) 9.0 ppm (A)	35 ppm (A) 9 ppm (A)
Nitrogen Dioxide	1-hr Annual	0.18 ppm (A) 0.030 ppm	0.100 ppm (U) 0.053 ppm (A)
Sulfur Dioxide	1-hr 24-hr Annual	0.25 ppm (A) 0.04 ppm (A) None	0.075 ppm (A) 0.14 ppm (A) 0.030 ppm (A)
Respirable Particulate Matter (PM ₁₀)	24-hr Annual	50 µg/m ³ (N) 20 µg/m ³ (N)	150 µg/m ³ (U) None
Fine Particulate Matter (PM _{2.5})	24-hr Annual	None 12 µg/m ³ (N)	35 µg/m ³ (N) 15.0 µg/m ³ (A)
Sulfates	24-hr	25 µg/m ³ (A)	None
Lead	30-day Quarterly	1.5 µg/m ³ (A) None	None 1.5 µg/m ³ (A)
Hydrogen Sulfide	1-hr	0.03 ppm (U)	None
Vinyl Chloride (chloroethene)	24-hr	0.010 ppm*	None
Visibility Reducing Particles	8-hr	Extinction coefficient of 0.23/km (U)	None
<u>Notes</u> A: Attainment N :Nonattainment U: Unclassified (insufficient data; generally indicates low concern) *Attainment information not available ppm: parts per million µg/m ³ : micrograms per cubic meter			
Source: BAAQMD 2010, CARB 2009			

Table 5-2: Ambient Air Quality near CPSRA, 2005-2009

Pollutant	Standard	Days Standard Exceeded In:				
		2005	2006	2007	2008	2009
Ozone	State 1-hr	9	18	4	9	11
Ozone	State 8-hr	9	22	9	20	13
Ozone	Federal 8-hr	1	12	1	12	8
Respirable Particulate Matter (PM ₁₀)	State 24-hr	6	15	4	5	1
Fine Particulate Matter (PM _{2.5})	Federal 24-hr	0	10	14	12	11
Notes: hr= hour Source: BAAQMD 2009						

Toxic Air Contaminants

Toxic air contaminants (TACs), or in federal terms, hazardous air pollutants, are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The occurrence and severity of odor impacts is subjective and depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. There are no major odor sources (e.g., wastewater treatment plants, landfills, or confined animal operations) within 2 miles of CPSRA. There are no odor generators as a part of this project.

Sensitive Receptors

Sensitive receptors are identified land uses that would be occupied by people most sensitive to the effects of air pollution, including the very young, the elderly, or people

weak from illness or disease. These receptors are generally residential land uses, schools, hospitals, and retirement homes. Sensitive receptors located in and around CPSRA would include recreational users and any permanent staff residences (e.g., campground hosts). CPSRA is currently surrounded by the Candlestick Park stadium parking area and associated parking lots. The nearest sensitive receptors are residences located to the south on Harney Way and in the Alice Griffith Public Housing project.

Regulatory Setting

Criteria Air Pollutants

At the federal level, the EPA implements national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (CAA), which was enacted in 1970 and was most recently amended in 1990. The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA).

CPSRA is located in the City and County of San Francisco, which is under the local jurisdiction of the BAAQMD. BAAQMD is the local agency that regulates sources of air pollution within the SFBAAB. BAAQMD attains and maintains air quality standards in San Francisco County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of BAAQMD includes the preparation of plans and programs for the attainment of AAQS, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. BAAQMD also inspects stationary sources, responds to citizen complaints; monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA, CAAA, and CCAA. All projects are subject to adopted BAAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include, but are not limited to: Regulation 6, Rule 1 "Particulate Matter Emission General Requirements."

Odors

Neither the state nor the federal governments have adopted any rules or regulations for the control of odor sources. However, the BAAQMD CEQA Guidelines state that for a plan to have a less than significant determination with regard to odor impacts, all odor sources within the plan area must be identified along with policies to minimize potential impacts from odors.

Thresholds

The air quality analysis uses criteria from State CEQA Guidelines Appendix G. According to these criteria, implementation of the CPSRA General Plan would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standards or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Impact Analysis

Impact AQ-1: Short-Term Construction-Generated Criteria Air Pollutant Emissions.

Construction-related emissions are described as short term or temporary in duration and have the potential to represent a significant impact with respect to air quality. Implementation of the General Plan would take place over time, with the implementation of various projects and plans (e.g., specific management plans). Most projects require minor construction activity—including trail construction, road management, or vegetation management—and would not result in substantial temporary emissions. A limited number of projects could involve more extensive construction, such as development of the boating center area. Earth movement would be associated with certain aspects of General Plan implementation such as shoreline stabilization and construction of the nature theater—these activities would occur within the 132.5-acre area over the next 20 years. BAAQMD recommends using the land use development screening sizes, included in the BAAQMD CEQA Air Quality Guidance, for analysis of projects such as the CPSRA General Plan (Kirk, pers. comm., 2011). Based on available information, construction would likely be amortized over the life of the plan, yielding 6.6 acres of construction per year. This annual disturbed acreage is well below the BAAQMD screening level of 67 acres of construction per year (BAAQMD 2011) for the “City Park” category. Sixty-seven acres represents approximately half of the acreage of CPSRA and it is highly unlikely that half of the park area would be disturbed in a single year over the lifetime of the General Plan. For specific projects that would be implemented under the General Plan, State Parks would include standard control measures to limit emissions to less-than-significant levels. Each individual project would be subject to subsequent environmental review to ensure that the necessary standard

control measures are included and implemented as part of the project. Therefore, implementation of the General Plan would not result in significant short-term construction-generated impacts to air quality. This impact would be **less than significant**.

Impact AQ-2: Long-Term Operational Criteria Air Pollutant Emissions.

Implementation of the General Plan is not expected to result in a significant increase in vehicle traffic on local and regional roadways. Currently, it is anticipated that a majority of the visitors to CPSRA would be from the planned Candlestick Point-Hunters Point Shipyard Phase II Project location immediately adjacent to the park and would arrive at the park by means other than personal automobile. The BAAQMD has established their screening level for air quality impacts related to parks as 2,613 acres. CPSRA is approximately 132 acres in size and therefore well under the BAAQMD screening level. It should be noted that while CPSRA-related vehicle trips would be expected to increase area roadway volumes compared to current peak levels as a result of General Plan implementation, the increase would not be expected to alter general traffic patterns on local roadways and would not be expected to generate trips from a substantial number of miles away. Thus, implementation of the project would not substantially increase vehicle miles traveled. Emissions associated with any changes to traffic patterns due to the Candlestick Point-Hunters Point Shipyard Phase II Project were evaluated as part of the environmental review for the development. It is also recognized by State Parks that fugitive dust issues associated with driving on unimproved roads would be addressed through implementation of interim measures for fugitive dust management. Because the General Plan would not generate a substantial number of vehicle trips or substantially alter existing traffic conditions, implementation of the General Plan would not result in a substantial increase in long-term regional ROG, NO_x, PM₁₀, or CO emissions associated with increases in vehicle trips. Consequently, implementation of the General Plan would not conflict with or obstruct implementation of BAAQMD's air planning efforts. As a result, this impact would be **less than significant**.

Impact AQ-3: Exposure to Toxic Air Contaminants.

Implementation of the land uses in the General Plan would not result in the generation of TAC emissions. Implementation of the General Plan would not result in long-term operational TAC emissions when compared to existing conditions. Specifically, implementation of the General Plan would not result in a substantial increase in the number of heavy duty vehicle trips when compared with current conditions. The overall number of heavy duty vehicles travelling to CPSRA is expected to remain similar to existing conditions. Furthermore, implementation of the General Plan would not result in the operation of any new major stationary emission sources that could be a source of

TACs. Thus, implementation of the General Plan would not expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be **less than significant**.

Impact AQ-4: Objectionable Odors.

Implementation of the General Plan would result in temporary diesel exhaust emissions from on-site construction equipment. Diesel exhaust emissions would be intermittent and temporary, and would dissipate rapidly from the source. No other existing odor sources are located in the vicinity of CPSRA and the General Plan does not call for the long-term operation of any new potential sources of odors. Thus, implementation of the General Plan would not result in exposure of sensitive receptors to objectionable odors. As a result, this impact would be **less than significant**.

5.6.13 Climate Change (GHG)

Introduction

Emissions of greenhouse gases (GHGs) have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change.

Legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis. Therefore, this section discusses global climate change and existing GHG emission sources; summarizes applicable federal, state, and local regulations; and analyzes potential short-term and long-term GHG impacts resulting from development of the CPSRA General Plan.

Environmental Setting

Global Climate Trends and Associated Impacts

Global warming is the name given to the increase in the average temperature of the Earth's near-surface air and oceans since the mid-20th century, and its projected continuation. Warming of the climate system is now considered to be unequivocal (IPCC 2007) with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years. Rising temperatures could have a variety of impacts, including increasing emissions of greenhouse gases and criteria pollutants associated with energy generation.

Higher temperatures also contribute to sea level rise by expanding ocean water, melting mountain glaciers and small ice caps, and causing portions of Greenland and the Antarctic ice sheets to melt (U.S. Environmental Protection Agency 2011). The California Resources Agency (CRA) states that sea level rise can cause damage to coastal communities and loss of land. BCDC has prepared maps for areas inundated by 16 inches of sea level rise by 2050 and 55 inches of sea level rise by 2100 (BCDC 2009). Extrapolating these projections to the 2075 mid-point, sea level rise would be about 36 inches (3 feet), although some studies have concluded this rise would not occur until after the year 2100 (Risien 2009).

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFC), hydrofluorocarbons (HFC), and water vapor. Each of the principal GHGs has a long atmospheric lifetime (1 year to several thousand years). In addition, the potential heat trapping ability of each of these gases vary significantly from one another. CH₄ is 23 times as potent as CO₂, while SF₆ is 22,200 times more potent than CO₂. Conventionally, GHGs have been reported as CO₂ equivalents (CO₂e). CO₂e takes into account the relative potency of non-CO₂ GHGs and converts their quantities to an equivalent amount of CO₂ so that all emissions can be reported as a single quantity.

The primary man-made processes that release these gases include the following: burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release CH₄, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high global warming potential gases such as SF₆, PFCs, and HFCs. Deforestation and land cover conversion have also been identified as contributing to global warming by reducing the Earth's capacity to remove CO₂ from the air and altering the Earth's albedo or surface reflectance, allowing more solar radiation to be absorbed.

Regulatory Setting

CEQA Guidelines

State CEQA Guidelines Section 15064.4, Determining the Significance of Impacts from Greenhouse Gas Emissions, encourages lead agencies to consider the following three factors to assess the significance of GHG emissions: (1) will the project increase or reduce GHGs as compared to baseline; (2) will the project's GHG emissions exceed the lead agency's threshold of significance; and (3) does the project comply with regulations or requirements to implement a statewide, regional, or local GHG reduction or mitigation plan. State CEQA Guidelines Section 15064.4 also recommends that lead agencies

make a good-faith effort, based on available information, to describe, calculate or estimate the amount of GHG emissions associated with a project.

State CEQA Guidelines Section 15126.4, Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects, includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, including but not limited to project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions; compliance with the requirements in a previously approved plan or mitigation program for the reduction or sequestration of GHG emissions, which plan or program provides specific requirements that will avoid or substantially lessen the potential impacts of the project; and measures that sequester carbon or carbon-equivalent emissions. In addition, amended State CEQA Guidelines Section 15126.4 includes a requirement that where mitigation measures are proposed for reduction of GHG emissions through off-site measures or purchase of carbon offsets, these mitigation measures must be part of a reasonable plan of mitigation that the relevant agency commits itself to implementing.

In addition, a new set of environmental checklist questions (VII. Greenhouse Gas Emissions) have been added to the State CEQA Guidelines Appendix G. The new questions ask whether a project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

California Air Resources Board (CARB)

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of state and local air pollution control programs. The CARB Scoping Plan (December 2008) (“The Scoping Plan”) states that local governments are “essential partners” in the effort to reduce GHG emissions. The Scoping Plan also acknowledges that local governments have “broad influence and, in some cases, exclusive jurisdiction” over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Many of the proposed measures to reduce GHG emissions rely on local government actions. The Scoping Plan encourages local governments to reduce GHG emissions by approximately 15% from current levels (i.e., year 2002 to 2004 average) by 2020 (CARB 2008b).

Bay Area Air Quality Management District

In May 2011, BAAQMD released an update to its previously adopted guidelines document. This CEQA Air Quality Guidelines document (BAAQMD 2011) is an advisory document that provides lead agencies, consultants, and project applicants with methods for analyzing and reviewing air quality and GHG impacts from land use development projects being considered within BAAQMD jurisdiction. The handbook contains guidance for quantifying GHG emissions from land use projects and provides guidance and analysis expectations for the evaluation of GHG emissions. The BAAQMD guidance was used to perform the GHG impact assessment in this analysis and is described further below.

Impact Analysis

Significance Criteria

The following thresholds of significance are based on Appendix G of the State CEQA Guidelines. The project would result in a significant impact related to global climate change if it would do either of the following:

- Generate GHG emissions, either directly or indirectly, that may have a significant cumulative impact on the environment, or
- Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As stated in Appendix G, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. Therefore, the following BAAQMD thresholds are used for determining significance in correlation to the Appendix G thresholds. The project would have a significant impact to GHG emissions if it would:

- Exceed screening criteria for GHG impacts established by BAAQMD; or
- Generate operational emissions exceeding 1,100 MT CO₂e per year.

Impact GHG-1: Greenhouse Gas Emissions Exceeding BAAQMD Established Screening Criteria.

Implementation of the General Plan is expected to result in GHG emissions from short-term construction equipment exhaust. Construction equipment numbers, specific activities, and their associated GHG emissions are unknown at the General Plan level. However, BAAQMD requires that all construction activities incorporate emission reduction measures (i.e., basic construction mitigation measures) prior to project approval (BAAQMD 2011). The basic construction mitigation measures are focused on air quality impacts, but also reduce GHG emissions as they relate to exhaust emissions. Implementation of the General Plan would involve construction activities including trail

enhancements, pier improvements and additions, and water recreation facilities, among others. Most of the proposed elements envisioned under the General Plan would not require long term (i.e., more than 1 year) or highly intensive construction activities. Because implementation of specific projects envisioned in the General Plan would incorporate and implement all required emission reduction measures in accordance with BAAQMD requirements, and because of the low intensity of construction activities of any particular projects, and the short-term nature of the construction activities, implementation of the General Plan would not generate substantial GHG emissions—either directly or indirectly—that may have a significant cumulative impact on the environment or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. This impact would be **less than significant**.

Impact GHG-2: Operational Greenhouse Gas Emissions Exceeding 1,100 MT CO₂e per year.

GHG emissions would also be generated by mobile and area sources associated with long-term operation of the project. Mobile-source emissions of GHGs would include employee and visitor trips to the park in passenger vehicles. Stationary-source emissions would result from indirect energy use and any on-site fixed emission sources (e.g., generators). BAAQMD has established significance screening criteria for GHGs for various project types. Per BAAQMD screening criteria, city parks measuring less than 600 acres would not generate levels of GHG emissions that cause a significant impact to global climate change (BAAQMD 2011).

Therefore, because the project is less than 600 acres in size (CPSRA is approximately 132.5 acres), it would not exceed BAAQMD screening criteria for significance. Thus, the project would not generate GHG emissions—either directly or indirectly—that may have a significant cumulative impact on the environment or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. This impact would be **less than significant**.

5.7 Other CEQA Considerations

5.7.1 Unavoidable Significant Environmental Effects

No significant and unavoidable impacts resulting from adopting and implementing the General Plan were identified.

5.7.2 Significant Irreversible Environmental Changes

No significant irreversible changes to the physical environment are anticipated from the adoption and implementation of this General Plan. Facility development—including structures, roads and trails—may be considered a long-term commitment of resources; however, the impacts can be reversed through removal of the facilities and discontinued access and use. Ongoing adverse effects on the environment, if any, can be monitored by park staff through adaptive management and consideration of carrying capacity issues. State Parks does remove, replace, or realign facilities—such as trails and campsites—where impacts have become unacceptable either from excessive use or from a change in environmental conditions.

The construction and operation of facilities may require the use of non-renewable resources. This impact is anticipated to be minor based on considerations of sustainable practices in site design, construction, maintenance, and operations that are generally practiced by State Parks. Sustainable principles used in design, construction, and management—such as the use of non-toxic materials and renewable resources, resource conservation, recycling, and energy efficiency—emphasize environmental sensitivity.

5.7.3 Growth-Inducing Impacts

State CEQA Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed project. Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducement itself is not an environmental effect, but may lead to environmental effects. Such environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or wildlife habitats, or conversion of agricultural and open space land to urban uses.

Implementing the General Plan would not foster additional population growth or the construction of additional housing. Economic growth would be limited to CPSRA facilities and concessions, which would provide a limited number of jobs that are expected to be filled by the local workforce. Therefore, the proposed project would not result in growth-inducing impacts.

5.7.4 Cumulative Impacts

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from

“the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]). By requiring an evaluation of cumulative impacts, CEQA seeks to ensure that large-scale environmental impacts will not be ignored.

As stated in Section 4.15, General Plan Phasing Process, specific park improvements that would be implemented under the proposed General Plan would be phased in conjunction with the land exchange between State Parks and the City and County of San Francisco for the Candlestick Point-Hunters Point Shipyard Phase II Project. As a result, the timing and location of this construction and the phasing of the land exchange will affect the implementation of facilities and programs planned for CPSRA. Therefore, the implementation schedule for proposed facilities at CPSRA is not known at this time.

Cumulative projects include development and construction projects within close proximity to CPSRA. As discussed in Section 2.6, Planning Influences, extensive redevelopment is planned in the vicinity of the park. Relevant land use plans and development proposals that contribute to cumulative impacts include the following:

- Candlestick Point-Hunters Point Shipyard Phase II Project
- Executive Park Neighborhood Plan
- Visitation Valley Redevelopment Project
- Brisbane Baylands

Descriptions of these redevelopment projects are presented in Section 2.6, Planning Influences. The Candlestick Point-Hunters Point Shipyard Phase II Project, in particular, will substantially change the neighborhood surrounding CPSRA. As stated in Section 2.6, the new development will create over 10,500 residential units, approximately 700,000 square feet of destination retail and entertainment space, over 2.5 million square feet of commercial space oriented around a green science and technology campus, and approximately 240 acres of new waterfront parks. The EIR that was prepared for the development determined that it would have considerable contributions to cumulative traffic and air quality impacts that would be significant and unavoidable (SFRA and SFPD 2009). The development would also have significant and unavoidable noise and historical resources impacts.

Implementation of the General Plan, in conjunction with other development projects and land use plans, could result in cumulatively considerable adverse impacts on the environment. However, the goals and guidelines included in the General Plan and presented in Chapter 4, Park Plan, require management actions and measures be implemented that would preserve, protect, restore, or otherwise minimize adverse

effects related to aesthetic resources, air quality, biological resources, cultural resources, energy, hazards and hazardous materials, light and glare, seismic hazards, water quality, flood risk, recreation, traffic and parking, and utilities. With the implementation of these actions, the General Plan's contribution to cumulative impacts would be less than considerable, and cumulative impacts associated with implementing the General Plan would be less than significant.

5.8 Alternatives to the Proposed Plan

The guiding principles for the analysis of alternatives in this EIR are provided in State CEQA Guidelines Section 15126.6, which requires that the alternatives analysis: (1) describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project; (2) consider alternatives that could reduce or eliminate any significant environmental impacts of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives; and (3) evaluate the comparative merits of the alternatives. State CEQA Guidelines Section 15126.6(d) permits the evaluation of alternatives to be conducted in less detail than is done for the proposed project. A description of the project alternatives, including the No Project Alternative, is provided below and summarized in Table 5-3 at the end of this section to allow for a meaningful evaluation, analysis, and comparison of these alternatives with the Preferred Alternative (proposed project)—the General Plan as described in Chapter 4. Alternatives 2, 3, and 4 each focus on different foundational goals of CPSRA. In accordance with the 1987 General Plan Amendment, the Yosemite Slough Restoration Plan was developed, and construction of Phase I (north of the slough) began in 2011. Detailed design of Phase II (south of the slough) will occur in the future. All four alternatives considered in this EIR assume implementation of the Yosemite Slough Restoration Project.

5.8.1 Alternative 1 No Project Alternative (Existing General Plan)

Description

CEQA requires an evaluation of a “no project” alternative and its impact (State CEQA Guidelines Section 15126.6[e][1]). The purpose of describing and analyzing the No Project Alternative is to allow decision makers to compare the impacts of approving the proposed General Plan with the expected impacts of not approving the General Plan. In the case of the CPSRA General Plan, the No Project Alternative, Alternative 1, assumes that State Parks would continue to follow the direction presented in the 1987 General Plan Amendment. The adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and the related land exchange are assumed not to occur.

The 1987 General Plan Amendment is currently only partially implemented. Elements that have not been developed include a Nature Education Center associated with wetland restoration at Yosemite Slough; group camping sites and an associated boat dock/fishing pier along the South Basin shoreline; a cultural center with concessions just north of Jackrabbit Beach; improved windsurfer facilities and shoreline access along the area now known as The Neck; and a cafe with associated parking area in the Last Port area (Figure 5-1).

Elements that have been only partially implemented include a complete hiking, jogging, and bicycle trail network through the entire CPSRA, and group picnic sites at all developed areas. Additionally, the 1987 General Plan Amendment calls for a motorized boat access facility along the South Basin shoreline and a fishing pier along The Neck. The motorized boat access facility was built, but failed, and was subsequently removed. The associated parking area and restroom facilities remain but are used only on game days at the adjacent Candlestick Park Stadium. Similarly, the fishing pier was built, but was vandalized, and is currently closed. Implementation of Alternative 1 would require following the 1987 General Plan Amendment, without a further amendment, and would limit new projects to those already identified. The Heart of the Park would contain an active grassy area that would be the focus of the majority of recreational activities, while the remaining areas of the park would be passive natural areas. The trail network would remain largely unchanged and would contain a mix of paved and natural surface trails throughout the park. It should be noted that the Yosemite Slough Restoration Project outlined in the 1987 General Plan has advanced, and construction of Phase 1 began in June 2011.

Evaluation

If a new General Plan were not adopted, the existing conditions would remain the same as they were analyzed under the 1987 General Plan Amendment, limiting the implementation of improvements beyond those planned. The primary differences in the development of Alternative 1 compared to the Preferred Alternative are the offering of fewer recreational opportunities and facilities, and the maintenance of the existing park boundary. While some park improvements in Alternative 1 are similar to those in the Preferred Alternative, the former would result in fewer proposed facilities and active recreation areas. Facilities proposed in Alternative 1 that differ from those in the Preferred Alternative include a group camping area along the South Basin shoreline, a café in the Lost Port area, and a cultural center at Jackrabbit beach. Facilities proposed in the Preferred Alternative include a pier along the South Basin shoreline, nature theater in Candlestick Meadows, boating center and pier at Jackrabbit Beach, bike/boat-in camping at The Point, enhanced windsurf facilities at The Neck, and an information center in the neighboring community.



Figure 5-1
Alternative 1
NO ACTION ALTERNATIVE
(EXISTING GENERAL PLAN;
KEEP EXISTING PARK BOUNDARY)

Alternative 1 would not include the pedestrian underpass proposed in the Preferred Alternative, because the vehicular bridge would not be constructed over Yosemite Slough.

Visitor use trends have changed since the 1987 General Plan Amendment was drafted, and are likely to continue to change in the future. The Preferred Alternative considers current and future visitation trends and therefore, is better suited than Alternative 1 to adapt park management to meet visitor needs over the long term.

Alternative 1 puts less emphasis on the protection and enhancement of natural resources at CPSRA than the Preferred Alternative. Although both alternatives include the restoration of Yosemite Slough, the Preferred Alternative would also create additional tidal marsh along the South Basin shoreline, enhance wildlife habitat in the Candlestick Meadows area, and incorporate green infrastructure elements for stormwater management. Alternative 1 does not address the challenge of sea level rise as does the Preferred Alternative, hindering the protection and adaptation of CPSRA's natural resources and visitor facilities.

Without the funds provided by the land exchange proposed under the Preferred Alternative, and given the current funding constraints of State Parks, implementation of additional improvements included in the 1987 General Plan Amendment is likely to be a challenge. Overall, Alternative 1 would likely have fewer construction-related impacts (e.g., construction traffic, air quality, and noise impacts) related to park improvements compared to the Preferred Alternative, because the planned development is less than the Preferred Alternative. However, implementation of the Goals and Guidelines included in Chapter 4, Park Plan, would serve to mitigate the majority of impacts associated with the Preferred Alternative.

5.8.2 Alternative 2 Community and Culture

Description

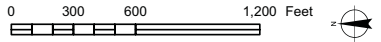
The focus of Alternative 2 is on cultural, interpretive/educational and community resources (Figure 5-2). Like Alternative 1, Alternative 2 assumes that the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and related land exchange would not occur. Similarly, Alternative 2 includes the Yosemite Slough Restoration Project called for in the 1987 General Plan.

Alternative 2 proposes to enhance CPSRA by focusing on the creation of cultural and community oriented programs and facilities. Cultural programs would be structured around revenue-generating facilities, which would ideally be financially self-sustaining or even raise funds for CPSRA overall.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-2
Alternative 2
COMMUNITY AND CULTURE
(EXISTING GENERAL PLAN + NEW DEVELOPMENT;
KEEP EXISTING PARK BOUNDARY)



07.14.2010



Alternative 2 would create a hub of community oriented activity in the Heart of the Park and Candlestick Meadows areas that would include group gathering areas, outdoor pavilions, and an active grassy area for a range of recreation activities. The remaining areas of the park would be passive natural areas; however, they would also allow for recreational programs and facilities. The existing Community Garden and native plant nursery would be expanded, as would their role in helping plant and maintain native landscapes in the park. Alternative 2 also proposes establishing a non-motorized boat launch and boat interpretive center along the South Basin shoreline and rebuilding the fishing pier in The Neck.

Alternative 2 would enhance the role of art and culture in the park through the creation of features, such as a sculpture garden in the Heart of the Park and art pieces along trails. Programs including art and dance workshops, community theater, or other performances would further strengthen CPSRA's cultural offerings.

Partnerships would be an important tool for developing, administering, and maintaining the cultural and community oriented programs and facilities proposed under Alternative 2. These cultural program partnerships would include, for example, building on the existing relationship with Literacy for Environmental Justice to expand community agriculture programs. The boat interpretive center could potentially be run in affiliation with a community, City, or university partner. The establishment of strong partnerships with local artist groups would facilitate the development of art features and programs at CPSRA. If the private operators of the Candlestick RV Park, which is adjacent to CPSRA, do not renew their lease, CPSRA could potentially provide RV camping as a revenue generation option.

Evaluation

As stated in Section 3.4, Assumptions for Future Scenario without the Candlestick Point-Hunters Point Shipyard Phase II Project, if circumstances change and the Candlestick Point-Hunters Point Shipyard Phase II Project were not constructed, State Parks would prepare a General Plan amendment that focuses on Alternative 2.

Alternative 2 includes fewer park improvements than the Preferred Alternative, because less funding would be available without the land exchange. Alternative 2 differs from the Preferred Alternative primarily by focusing on cultural and community oriented programs and facilities, with less emphasis on active recreation and natural resource protection. The two alternatives share some similar park improvements, and the main difference is the focus on art in the park under Alternative 2. For example, the Preferred Alternative would not include the sculpture garden proposed in the Heart of the Park. Facilities proposed in the Preferred Alternative that are excluded from Alternative 2 include the pier along the South Basin shoreline, nature theater in Candlestick Meadows, bike/boat-

in camping at The Point, enhanced windsurf facilities at The Neck, and the information center in the neighboring community. The non-motorized boat launch and boat interpretive center proposed under Alternative 2 would likely be smaller and offer fewer recreational and educational programs than the boating center proposed under the Preferred Alternative.

Alternative 2 focuses less on the protection and enhancement of natural resources than the Preferred Alternative. While both alternatives include the Yosemite Slough Restoration Project, Alternative 2 would not create additional tidal marsh along the South Basin shoreline. Instead, Alternative 2 would locate the non-motorized boat launch and boat interpretive center along the South Basin shoreline, which may have greater impacts on sensitive natural resources in this area compared to the boat center located in the Heart of the Park in the Preferred Alternative. Alternative 2 would also extend the active grassy area into Candlestick Meadows, likely increasing the construction-related and operational impacts to wildlife in this area relative to the Preferred Alternative. In addition, Alternative 2 does not include green infrastructure elements, such as raingardens, or address the threat of sea level rise, as does the Preferred Alternative.

Alternative 2 would likely result in fewer construction-related impacts (e.g., traffic, air quality, and noise impacts), because fewer new facilities would be constructed over the lifetime of the General Plan; however, implementation of the Goals and Guidelines included in Chapter 4, Park Plan, would mitigate the majority of impacts associated with the Preferred Alternative. As with Alternative 1, the lack of funding associated with the land exchange proposed under the Preferred Alternative, coupled with State Parks' current funding constraints, may hinder implementation of improvements included in Alternative 2.

5.8.3 Alternative 3 Nature in the City

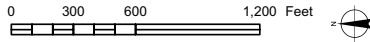
Description

Alternative 3 focuses on CPSRA's natural resources—both their enhancement and the provision of nature-based recreation (Figure 5-3). Unlike Alternatives 1 and 2, this alternative assumes that the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and associated land exchange would occur. The main concept behind Alternative 3 is to create an urban refuge that highlights nature in the city. Habitat restoration, quiet recreation, and spaces that allow a sense of respite and retreat from the surrounding urban environment are the emphasis of this alternative.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-3
Alternative 3
NATURE IN THE CITY



07.14.2010



Under Alternative 3, the majority of CPSRA would consist of natural areas, with nature-based recreational facilities such as a nature center and interpretive play area on the South Basin shoreline, and a viewing dock in the Candlestick Meadows area. The fishing pier in The Neck would be reconstructed to expand opportunities beyond the fishing that occurs at the existing pier at The Point. Active recreation would be concentrated around Jackrabbit Beach. In addition to an active grassy area, facilities in this area would include a cultural center, bike/kayak concessions, and a non-motorized boat launch pier. The park's trail system would consist of a finely branched network of smaller paths, dispersing the pedestrian circulation and allowing for the ability to walk in solitude, with many potential routes to wander. Gathering areas would be scattered and small in scale, suitable for individuals or family sized groups.

In addition to nature-based recreation, Alternative 3 emphasizes the enhancement of CPSRA's natural resources. As with the other alternatives, Alternative 3 would implement the Yosemite Slough Restoration Project. This alternative would also extend the creation of tidal wetlands along the South Basin shoreline. In addition, Alternative 3 would focus on the enhancement of wildlife habitat in the Candlestick Meadows area, limiting recreational opportunities to trail use and wildlife viewing with few new facilities.

Evaluation

Alternative 3 emphasizes the protection and enhancement of natural resources and the provision of nature-based recreation at CPSRA through facility siting, uses, and design. Alternative 3 proposes a similar level of park improvements compared to the Preferred Alternative. However, the focus on nature-based recreation and natural resource protection under this alternative would result in fewer facilities and programs for active recreation. The cultural center and non-motorized boat launch proposed for the Heart of the Park in Alternative 3 would likely have similar construction-related and operational impacts as the boating center proposed in the same area under the Preferred Alternative. Similarly, the viewing dock proposed under Alternative 3 would likely have equivalent impacts to the pier proposed in the Preferred Alternative. However, the Preferred Alternative would not include the nature center and interpretive play area proposed along the South Basin shoreline. Facilities proposed in the Preferred Alternative that are excluded from Alternative 3 include the pier along the South Basin shoreline, nature theater in Candlestick Meadows, bike/boat-in camping at The Point, enhanced windsurf facilities at The Neck, and the information center in the neighboring community.

Alternative 3 would provide a similar level of natural resource protection and enhancement as the Preferred Alternative. Both alternatives include the creation of additional tidal marsh along the South Basin shoreline and the enhancement of wildlife

habitat in the Candlestick Meadows area. However, Alternative 3 does not include raingardens for stormwater management or address the threat of sea level rise, as the Preferred Alternative does.

Overall, Alternative 3 would likely result in similar construction-related impacts (e.g., traffic, air quality, and noise impacts) as the Preferred Alternative, which, for the latter, would be minimized through the implementation of the Goals and Guidelines outlined in Chapter 4, Park Plan. Funding for park improvements and operations under both Alternative 3 and the Preferred Alternative would result in similar levels of natural resource enhancement.

5.8.4 Alternative 4 Recreation by the Bay

Description

Alternative 4 focuses on CPSRA as a vibrant recreational waterfront park that promotes active, healthy lifestyles (Figure 5-4). Like Alternative 3, this alternative assumes that the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and associated land exchange would occur. Under Alternative 4, large areas of CPSRA would be active grassy areas composed of turf that could be used for a variety of activities and events. The areas for active recreation would extend from The Neck to the South Basin shoreline. Alternative 4 would include a range of recreation facilities, including group-scale picnic and other gathering areas. The path system would concentrate people on a simplified system of wide, promenade-like trails, allowing for active people-watching and a sense of vibrancy. A non-motorized boat launch and fishing pier would be located along the South Basin shoreline. In the Candlestick Meadows area, a large event lawn and amphitheater would host events such as concerts, festivals, or firework displays. A State Parks storefront and cultural center would be located in the adjacent neighborhood and serve as a gateway to connect CPSRA to the redeveloped area. A concession area and café near Jackrabbit Beach would provide an energizing amenity for an expanded beach area. In the quieter zone at The Point, low-impact boat-in/bike-in camping sites would be provided. In The Neck area, a new fishing pier would provide access over the water and serve as a breakwater to protect the beach at Hermit's Cove. It would also encourage the build-up of sand while creating a protected area for swimming, wading, and windsurfing launch access. A windsurfing and sailing center and a café with bike rental facilities would be located at the intersection of Arellous Walker Drive and Harney Way, an important entrance to CPSRA, and adjacent to the Candlestick Point-Hunters Point Shipyard Phase II Project's largest parking garage.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-4
Alternative 4
RECREATION BY THE BAY

Although not its primary focus, Alternative 4 would provide for the protection and enhancement of CPSRA's natural resources. The alternative would continue the implementation of the Yosemite Slough Restoration Project. Tidal wetland restoration areas would be incorporated along the South Basin and eastern shorelines, but in small nodes expanded around existing wetland areas. The Point and the Last Port would remain more passive and natural, in order to preserve existing natural resources in these areas.

Evaluation

Alternative 4 focuses on active recreation and would likely result in a greater level of facility and program development than the Preferred Alternative. The fishing pier and non-motorized boat launch along the South Basin shoreline, concessions and café in the Heart of the Park, low-impact boat-in/bike-in camping sites at The Point, and fishing pier along The Neck proposed under Alternative 4 would be similar to facilities included in the Preferred Alternative. However, the addition of the event space, and cultural center in Candlestick Meadows and the windsurf and sailing center and café in the Last Port area in Alternative 4 would likely result in greater construction-related impacts. In addition, Alternative 4 distributes active recreational facilities throughout the park rather than concentrating them around a central hub, as the Preferred Alternative does, which would likely result in greater construction and operational impacts to wildlife and other biological resources.

The increase in recreational facilities proposed under this alternative would also likely encourage greater visitation to the park and, therefore, the potential for increased operational impacts, such as those related to noise, traffic, and biological resources.

Alternative 4 would provide a lower level of natural resource protection and enhancement than the Preferred Alternative. The active grassy areas proposed in Alternative 4 would likely increase water consumption compared to the Preferred Alternative, which includes more native and drought-tolerant plants. In addition, while Alternative 4 includes implementation of the Yosemite Slough Restoration Project, it proposes isolated pockets of tidal wetlands, which would reduce the amount of continuous and functioning habitat compared to the Preferred Alternative. Furthermore, Alternative 4 does not incorporate green stormwater infrastructure, such as raingardens, or address the threat of sea level rise.

Overall, construction-related and operational impacts would likely be greater under Alternative 4 than the Preferred Alternative, given the increased levels of recreational facility development. In addition, the Preferred Alternative would provide greater protection and enhancement of CPSRA's natural resources, and implementation of the

Goals and Guidelines included in Chapter 4, Park Plan, would serve to mitigate environmental impacts.

5.8.5 Identification of the Environmentally Superior Alternative

State CEQA Guidelines Section 15126(d)(2) state that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. Under the No Project Alternative, the proposed General Plan management goals and guidelines for preserving and restoring natural resources would not be implemented, however, this alternative would be environmentally superior compared to the other alternatives discussed above because development of facilities and other park improvements would be limited to the 1987 General Plan Amendment. In accordance with State CEQA Guidelines Section 15126(d)(2), the other alternatives evaluated in the EIR are considered for the environmentally superior alternative. Alternatives considered in this Draft EIR include the Preferred Alternative (the proposed General Plan), the No Project Alternative (Alternative 1), the Community and Culture Alternative (Alternative 2), the Nature in the City Alternative (Alternative 3), and the Recreation by the Bay Alternative (Alternative 4).

Under the Preferred Alternative and Alternatives 2 through 4, CPSRA would be developed with variations on the number and location of facilities and improvements. Of those four alternatives, Alternative 3 would be the environmentally superior alternative. Alternative 3 includes fewer park facilities and improvements than the Preferred Alternative and Alternative 4, and therefore it would have fewer construction-related impacts than those alternatives. While Alternative 2 would have fewer construction-related impacts, Alternative 3 includes a greater level of natural resources preservation and enhancement than Alternative 2. Therefore, Alternative 3 is the environmentally superior alternative.

Table 5-3: Alternatives Comparison


	Preferred Alternative*	Alternative 1 Existing General Plan	Alternative 2 Community and Culture	Alternative 3 Nature in the City	Alternative 4 Recreation by the Bay
Yosemite Slough	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Expanded Community Garden/native plant nursery • Pedestrian underpass 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Community Garden/Nature Center • Administration/Maintenance 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Expanded Community Garden/native plant nursery • Administration/Maintenance 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Community Garden/native plant nursery • Administration/Maintenance 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Community Garden/native plant nursery • Administration/Maintenance
South Basin Shoreline	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Group camping sites • Boat dock/fishing pier 	<ul style="list-style-type: none"> • Passive natural area • Non-motorized boat launch • Boat interpretive center 	<ul style="list-style-type: none"> • Passive natural area • Nature Center + interpretive play area • Tidal wetland creation along shoreline 	<ul style="list-style-type: none"> • Large active grassy area with smaller passive natural areas • Tidal wetland restoration around existing wetlands • Non-motorized boat launch • Fishing/viewing pier
Candlestick Meadows	<ul style="list-style-type: none"> • Large passive natural area with smaller active grassy areas • Wildlife habitat enhancement • Tidal wetland restoration around existing wetlands • Nature theater 	<ul style="list-style-type: none"> • Passive natural area • Motorized boat launch (removed) 	<ul style="list-style-type: none"> • Active grassy area • Group gathering areas • Outdoor pavilions 	<ul style="list-style-type: none"> • Passive natural area • Wildlife habitat enhancement • Viewing dock 	<ul style="list-style-type: none"> • Large active grassy area with smaller passive natural areas • Tidal wetland restoration around existing wetlands • Large event lawn + amphitheater

	Preferred Alternative*	Alternative 1 Existing General Plan	Alternative 2 Community and Culture	Alternative 3 Nature in the City	Alternative 4 Recreation by the Bay
Heart of the Park	<ul style="list-style-type: none"> • Active grassy area • Enhanced Jack Rabbit beach • Non-motorized boat launch/pier • Boating center • Bike/boat concessions • Storefront + cultural center (adjacent neighborhood) 	<ul style="list-style-type: none"> • Active grassy area • Jack Rabbit beach • Cultural center with concessions 	<ul style="list-style-type: none"> • Active grassy area • Jack Rabbit beach • Group gathering areas • Outdoor pavilions • Sculpture garden 	<ul style="list-style-type: none"> • Active grassy area • Jack Rabbit beach • Cultural Center • Bike/kayak concessions • Non-motorized boat launch/pier 	<ul style="list-style-type: none"> • Active grassy area • Expanded Jack Rabbit beach • Concessions • Café • Storefront + cultural center (adjacent neighborhood)
The Point	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier • Bike-in/boat-in camping sites 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier • 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier • Bike-in/boat-in camping sites
The Neck	<ul style="list-style-type: none"> • Passive natural area with small active grassy area • Enhanced Hermit's Cove beach • Enhanced windsurf facilities • New fishing/viewing pier + breakwater • Habitat terraces 	<ul style="list-style-type: none"> • Passive natural area • Hermit's Cove beach • Windsurf launch • Reconstructed fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Hermit's Cove beach • Windsurf launch • Reconstructed fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Hermit's Cove beach • Windsurf launch • Reconstructed fishing/viewing pier 	<ul style="list-style-type: none"> • Active grassy area • Hermit's Cove beach • Windsurf launch • New fishing/viewing pier + breakwater • Protected swimming/wading area
Last Port	<ul style="list-style-type: none"> • Passive natural area • Enhanced Candlestick Cove beach 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach • Café 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach • 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach • Windsurf/sailing center • Café • Bike rental

	Preferred Alternative*	Alternative 1 Existing General Plan	Alternative 2 Community and Culture	Alternative 3 Nature in the City	Alternative 4 Recreation by the Bay
Parkwide		<ul style="list-style-type: none"> • Complete hiking, jogging and bicycling trail network • Extended Bay Trail • Group picnic sites at all developed areas • Interpretive panels 	<ul style="list-style-type: none"> • Complete hiking, jogging and bicycling trail network • Extended Bay Trail • Art pieces along trails 	<ul style="list-style-type: none"> • Finely branched network of smaller trails - pedestrian focus • Extended Bay Trail • Small, scattered picnic areas for families and individuals 	<ul style="list-style-type: none"> • Wide, promenade-like paths – active recreation focus • Extended Bay Trail • Variety of group picnic areas
*Note: More detail has been developed for the Preferred Alternative. Please see Chapter 4, Park Plan, for a discussion of the possible facilities and elements in each geographic area.					

6 References





6 References

2 – Existing Conditions

49ers. See The San Francisco 49ers.

ABAG. See Association of Bay Area Governments.

Albion Environmental. 2001. Ohlone Costanoan Participation in Archaeological Investigations, Doyle Drive, Presidio of San Francisco. Cultural resources report prepared by Albion Environmental, Santa Cruz, CA.

Alexander, J. 2009. Overview: The Blue Greenway Vision. Neighborhood Parks Council. Available: <http://www.bluegreenway.org/alexander_birdseye.html>. Accessed October 28, 2009.

Arc Ecology. 2003. Community Window on the Hunters Point Shipyard: PCB Contamination in the South Basin and Yosemite Slough. Overview fact sheet, funded by the San Francisco Department of the Environment October 2003. Website: http://www.communitywindowontheshipyard.org/fact%20sheets/factsheet-SoBasin_PCB.pdf. Accessed January 28, 2010.

Archambault, Laurie. Senior Environmental Scientist. California Department of Parks and Recreation, Northern Service Center. Sacramento, CA. January 21, 2010—phone conversation with Sarah Heard of AECOM regarding background and status of the Yosemite Slough Restoration Project.

Association of Bay Area Governments. 2005 (September). The San Francisco Bay Trail Project Gap Analysis Study. Prepared by Alta Planning + Design, Questa Engineering, and GreenInfo Network.

———. 2009. ABAG Projections 2009: Regional Projections. Available: <<http://www.abag.ca.gov/planning/currentfcst/regional.html>>. Accessed November 4, 2009.

Bachman, Steve. Senior Park and Recreation Specialist. California State Parks, Petaluma, CA. September 16, 2009— e-mail to Nathan Tamarine of PBSJ regarding existing recreation facilities at Candlestick Point State Recreation Area. December 3, 2009— e-mail to Sarah Heard of AECOM regarding information from the 2007/2008 Statistical Report for Candlestick Point State Recreation Area.

Banks, P.M. 1981. Subsurface Archaeological Investigations at CA-SFR-7, the Griffith-Shafter Mound, and the Thomas-Hawes Mound, along the Sunnysdale-Yosemite Alignment 2A-1, City and County of San Francisco. Rohnert Park, CA: Northwest Information Center.

Basin Research Associates, Inc. 2004. Cultural Resources Review Rincon De Los Esteros Redevelopment Area North San Jose Environmental Impact Report Proposed Residential Areas and Urban Industrial Core Area City of San Jose, Santa Clara County, California. Report on file, Northwest Information Center, Rohnert Park, California

Bay Area Census. 2009a. Population by Race/Ethnicity and County, 1980-2000. Available: <<http://www.bayareacensus.ca.gov/historical/corace.htm>>. Last updated October 1, 2003. Accessed November 4, 2009.

———. 2009b. Bay Area 1970-1990 Census Data. Available: <<http://www.bayareacensus.ca.gov/bayarea70.htm>>. Accessed November 4, 2009.

———. 2009c. Bay Area Data. Available: <<http://www.bayareacensus.ca.gov/bayarea.htm>>. Accessed November 23, 2009.

———. 2009d. San Mateo County 1970-1990 Census Data. Available: <<http://www.bayareacensus.ca.gov/counties/SanMateoCounty70.htm>>. Accessed November 4, 2009.

———. 2009e. San Mateo County. Available: <<http://www.bayareacensus.ca.gov/counties/SanMateoCounty.htm>>. Accessed November 4, 2009.

- . 2009f. Alameda County 1970-1990 Census Data. Available:
<<http://www.bayareacensus.ca.gov/counties/AlamedaCounty70.htm>>. Accessed November 4, 2009.
- . 2009g. Alameda County. Available:
<<http://www.bayareacensus.ca.gov/counties/AlamedaCounty.htm>>. Accessed November 4, 2009.
- . 2009h. Marin County 1970-1990 Census Data. Available:
<<http://www.bayareacensus.ca.gov/counties/MarinCounty70.htm>>. Accessed November 4, 2009.
- . 2009i. Marin County. Available:
<<http://www.bayareacensus.ca.gov/counties/MarinCounty.htm>>. Accessed November 4, 2009.
- Bay Area Census. 2010. San Francisco City and County. Available:
<<http://www.bayareacensus.ca.gov/counties/SanFranciscoCounty.htm>>. Accessed October 26, 2011.
- Bay Area Integrated Regional Water Management Plan (IRWMP) website. Not dated. Candlestick Point State Recreation Area Yosemite Slough Restoration Project abstract. Website: <http://bairwmp.org/projects/candlestick-point-state-recreation-area-yosemite>. Accessed February 1, 2010.
- Bay Conservation and Development Commission. 2005 (April). Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay. San Francisco, CA.
- . 2006 (July 7). Recreation and San Francisco Bay, Staff Report. San Francisco, CA.
- . 2007 (September 7). Draft San Francisco Bay Area Water Trail Plan. San Francisco, CA.
- . 2008 (February). San Francisco Bay Plan. Adopted 1968; reflects Bay Conservation and Development Commission amendments through January 2008. San Francisco, CA.
- . 2009 (October 1). Draft Staff Report and Revised Preliminary Recommendations for Proposed Bay Plan Amendment 1-08 Concerning Climate Change (For Commission consideration on November 5, 2009). San Francisco, CA.
- Baye, Peter. 2006. Selected Tidal Marsh Species of the San Francisco Estuary: A Field Identification Guide. Prepared for the San Francisco Estuary Invasive Spartina Project. Berkeley, CA.

- BCDC. See Bay Conservation and Development Commission.
- Beardsley, R. 1954. Temporal and Areal Relationships in Central California Archaeology. University of California Archaeological Survey Reports 24 and 25.
- Bennyhoff, James A. 1961. The Ethnogeography of the Plains Miwok. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Berkeley.
- Bennyhoff, J.A. 1982. Central California Augustine: Implications for Northern California Archaeology. Contributions of the University of California Archaeological Research Facility, Berkeley 52:65–74.
- Bennyhoff, J.A. 1977. Ethnogeography of the Plains Miwok. University of California, Center for Archaeological Research at Davis, Publications 5.
- Bennyhoff, J.A., and D.A. Fredrickson. 1969. A Proposed Integrative Taxonomic System for Central California Archaeology. Contributions of the University of California Archaeological Research Facility, Berkeley 52:15–24.
- Bickel, P.M. 1981. San Francisco Bay archaeology: sites ALA-328, ALA-13 and ALA-12. Contributions of the University of California Archaeological Research Facility, 43.
- Blue Greenway Task Force. 2006 (July 26). Vision and Roadmap to Implementation (Draft). San Francisco, CA.
- Bolton, H.E. 1930. Anza's California Expeditions, Volume III. University of California Berkeley Press, Berkeley, CA.
- Brisbane. See City of Brisbane.
- Broadbent, S. 1972. The Rumsen of Monterey: An Ethnology from Historical Sources. Contributions of the University of California Archaeological Research Facility (14), 45-93.
- California Department of Finance. 2007 (July). Population Projections for California and Its Counties 2000–2050. Sacramento, CA.
- California Department of Parks and Recreation. 1978a (July). Candlestick Point S.R.A. Topography.
- . 1978b (January). Plot Plan – Artificial Fill and Bay Mud Limits.
- . 1978c (January). Candlestick Point State Recreation Area Existing Utilities Plot Plan.

- . 1979 (June). Candlestick Point State Recreation Area Resource Management Plan, General Development Plan, and Environmental Impact Report. Adopted November 17, 1978. Sacramento, CA.
- . 1988 (March). Candlestick Point State Recreation Area General Plan. Adopted November 17, 1978; reflects California State Park and Recreation Commission amendments through May 8, 1987. Sacramento, CA.
- . 2001a (May). Comprehensive Statewide Historic Preservation Plan for California 2000-2005. Available: www.parks.ca.gov. Accessed November 15, 2010.
- . 2001b. Transition and Trail Plans for Accessibility in State Parks.
- . 2002 (June). Recreation Trail Plan Phase 1. Sacramento, CA.
- . 2003. Candlestick Point State Recreation Area [Brochure]. Sacramento, CA.
- . 2003a. Interpretation and Education Division. All Visitors Welcome: Accessibility in State Park Interpretive Programs and Facilities. Third Edition.
- . 2005a (December). Draft Initial Study, Mitigated Negative Declaration: Candlestick Point State Recreation Area, Yosemite Slough Restoration Project. Sacramento, CA.
- . 2005b. Parks and Recreation Trends in California 2005. Sacramento, CA.
- . 2006 (March). Candlestick Point State Recreation Area Redevelopment Study. Acquisition and Development Division, Northern Service Center. Sacramento, CA.
- . 2008 (October). Planning Handbook. Sacramento, CA.
- . 2009a (March). California State Park System Statistical Report: 2007/08 Fiscal Year. Statewide Planning Unit, Planning Division. Sacramento, CA.
- . 2009b. 2007–2009 State Park Visitor Survey Report: Initial Candlestick Data. Sacramento, CA.
- . 2009c. Candlestick Point State Recreation Area: State Recreation Area. Available: http://www.parks.ca.gov/?page_id=519. Accessed October 22, 2009.
- . 2009d. Accessible Features in State Parks: Candlestick Point. Available: <http://access.parks.ca.gov/parkinfo.asp?park=67&type=0>. Accessed October 22, 2009.

- . 2009e. San Bruno Mountain State Park. Available: <http://www.parks.ca.gov/default.asp?page_id=518>. Accessed November 23, 2009.
- . 2009f. Find a Park. Available: <http://www.parks.ca.gov/parkindex/region_info.asp?id=5&tab=1>. Accessed November 4, 2009.
- . 2009g. The Complete Findings, Survey on Public Opinions and Attitudes on Outdoor Recreation in California. Available: <<http://parks.ca.gov/pages/795/files/2009%20spoa%20complete%20findings%2009_28_09.pdf>>
- . 2010 (March). Here Come the 'Millennials': What You Need to Know to Connect with this New Generation. Recreation Opportunities. Planning Division, Recreation Section. Sacramento, CA.
- California Department of Water Resources. 2003. California's Groundwater Bulletin 118, Visitation Valley and South San Francisco Groundwater Basins, Update 2003. Last updated 2/27/2004.
- California Environmental Protection Agency. 2011. Cortese List Data Resources. Last updated October 21, 2008. Available: <http://www.calepa.ca.gov/sitecleanup/corteselist/>. Accessed July 29, 2011.
- California Integrated Waste Management Board. 2009. Cleanup Completion Report: Candlestick Point State Recreation Area Last Rubble Pile Disposal Site. 38-CR-0027. Sacramento, CA.
- California Native Plant Society. 2010. Electronic Inventory of Rare and Endangered Vascular Plants of California. Last updated August 30, 2009. Available: <<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>>. Accessed February 8, 2010.
- California Natural Diversity Database. 2010. Results of electronic record search (February). California Department of Fish and Game, Biogeographic Data Branch. Sacramento, CA.
- California Natural Resource Agency. 2009. 2009 California Climate Adaptation Strategy. Sacramento, CA.
- California Ocean Protection Council. 2006. A Vision for Our Ocean and Coast. Sacramento, CA.
- . 2009. Ocean Protection Council Program Priorities for 2009 through 2010. Available: <<http://www.opc.ca.gov/2009/01/ocean-protection-council-program-priorities-for-2009-through-2010/>>. Accessed January 20, 2010.

California Regional Water Quality Control Board, San Francisco Region. 2007a (January 18). San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). Adopted April 1975; reflects State Water Resources Control Board amendments through January 18, 2007. Oakland, CA.

———. 2007b (July 11). Tentative Order. Waste Discharge Requirements and Water Quality Certification for: California Department of Parks and Recreation, Yosemite Slough Restoration Project, City and County of San Francisco. Oakland, CA.

California State Parks Foundation. 2005 (February 11). Phase II Environmental Site Assessment: Yosemite Slough Wetlands Restoration. Prepared by Northgate Environmental Management, Inc.; Wetlands Research Associates; Romberg Tiburon Center, San Francisco State University; Noble Consultants; and Lipton Environmental Group, Oakland, CA.

———. 2010a. Earth Day 2010. Available: <<http://www.calparks.org/programs/earth-day/>>. Accessed February 16, 2010.

———. 2010b. Earth Day 2009 Project Sites. Available: <<http://www.calparks.org/programs/earth-day/ed09-project-sites.html>>. Accessed February 16, 2010.

———. 2010c. Candlestick Point Wetlands Restoration. Available: <<http://www.calparks.org/programs/resources/candlestick-point-state.html>>. Accessed October 28, 2009.

CCSF. See City and County of San Francisco

City and County of San Francisco. 2007. Bayview Transportation Improvements Project Natural Environmental Study Report, Draft (December). San Francisco, CA.

City of Brisbane. 2009. Baylands Summary. Available: <http://www.ci.brisbane.ca.us/Content.asp?Cat_Id=240000724&C_ID=240000621>. Accessed January 6, 2010.

City of Pacifica. 2009. Linda Mar Beach (Pacifica State Beach). Available: <http://www.cityofpacific.org/depts/rec_department/parksbeaches/default.asp>. Accessed November 4, 2009.

CIWMB. See California Integrated Waste Management Board.

CNDDb. See California Natural Diversity Database.

CNPS. See California Native Plant Society.

- CP Development Co., LP. 2009. Candlestick Point/Hunters Point Shipyard Tree Survey. San Francisco, CA. Prepared by H.T. Harvey & Associates.
- CSPF. See California State Parks Foundation.
- Department of the Navy, Base Realignment and Closure. 2008 (April 30). Final Feasibility Study Report for Parcel F, Hunters Point Shipyard, San Francisco, CA. BAI.6106.0004.0003. Prepared by Barajas & Associates, Inc. San Diego, CA.
- East Bay Regional Park District. 2011. Crown Memorial State Beach. Available: <http://www.ebparks.org/parks/crown_beach>. Accessed April 12, 2011.
- EBRPD. See East Bay Regional Park District.
- ENGEO. See ENGEO, Incorporated.
- ENGEO, Incorporated. 2009. Preliminary Geotechnical Report: Hunters Point Shipyard Phase II and Candlestick Point. Prepared for Lennar Urban. May 21, 2009, San Francisco, CA.
- Fredrickson, David A. 1973. Early Cultures of the North Coast Ranges. Ph.D. Dissertation, University of California Davis Department of Anthropology. Davis, CA.
- Fredrickson, David A. 1974. Cultural Diversity in Early Central California: A View from the North Coast Ranges. *Journal of California Anthropology* 1(1):41–54.
- Geomatrix, 1998. Reference Report Summarizing Environmental Conditions Bayview Hunters Point Brownfields Pilot Project, San Francisco, California. April 1998.
- GGNRA. See Golden Gate National Recreation Area.
- Gifford, E.W. 1916. Composition of California Shellmounds. *University of California Publications in American Archaeology and Ethnology*, 12, 1-29.
- Gifford, E.W. 1940. Californian Bone Artifacts. *University of California-Archaeological Reports* 3: 153-237.
- Global Security. Available: www.GlobalSecurity.org. Accessed November 14, 2010.
- Golden Gate Audubon Society. 2004 (July 27). Final Report: Yosemite Slough Wildlife Survey 2003–2004. Berkeley, CA. Prepared by LSA, Point Richmond, CA.
- Golden Gate National Recreation Area. 2006 (Spring). General Management Plan/Environmental Impact Statement Newsletter #1. San Francisco, CA.

- . 2009a. Plan Your Visit. Available: <<http://www.nps.gov/goga/planyourvisit/index.htm>>. Last updated July 23, 2009. Accessed November 3, 2009.
- . 2009b. Things to Do. Available: <<http://www.nps.gov/goga/planyourvisit/things2do.htm>>. Last updated July 25, 2009. Accessed November 3, 2009.
- . n.d. Golden Gate National Recreation Area [Brochure, Web edition]. San Francisco, CA.
- GGAS. See Golden Gate Audubon Society.
- Heizer, R.F. 1949. The Archaeology of Central California I: The Early Horizon. University of California Anthropological Records 12 (1).
- Hamusek-McGann, B., Baker, C. L., & Maniery, M. 1998. Archaeological Inventory and Assessment of Hunters Point Shipyard, San Francisco County, California. Rohnert Park, CA: Northwest Information Center.
- Heizer, R.F., and A.B. Elsasser. 1980. The Natural World of the California Indians. University of California Berkeley Press, Berkeley, CA.
- Hoover, Mildred, Hero Rensch, Ethel Rensch, and William Abeloe. 1990. Historic Spots in California. Stanford University Press. Palo Alto, CA.
- Hope, A., M. Hylkema, and T. Van Buren. 1996. Archaeological Survey and Historical Resource Evaluation Report for the Baumberg Biological Mitigation Tract, Alameda County. Report prepared for California Department of Transportation District 4 – Oakland.
- Hupman, Jan M. and David Chavez. 2001. Archaeological Resources Investigation for the Bayview-Hunters Point Redevelopment Plan, San Francisco, California. Report submitted to EIP Associates, San Francisco, CA.
- Jerman, Michelle C. 2007. Final Archaeological Survey Report Bayview Traffic Improvements Project. Caltrans District 4, San Francisco County, California. Prepared by Jones and Stokes, San Francisco, CA for Caltrans District 4, Oakland, CA.
- Kelley & VerPlanck. 2009 (November 11). Bayview Hunters Point: Area By Survey Historic Context Statement (Draft). San Francisco, CA.
- Kellogg, Michael. Supervising Biologist. San Francisco Public Utilities Commission, San Francisco, CA. December 3, 2009— email to Sarah Heard of AECOM regarding water quality monitoring within Candlestick Point State Recreation Area.

- Kroeber, A. 1925. Handbook of California Indians. Bureau of American Ethnology Bulletin, 78.
- LEJ. See Literacy for Environmental Justice.
- Lennar Corporation. 2008. Hunters Point Shipyard and Candlestick Point State Recreation Area Preliminary Delineation of Wetlands. San Francisco, CA. Prepared by H.T. Harvey & Associates.
- Levy, R. 1978. Costanoan. In R. Heizer (Ed.), Handbook of North American Indians, vol. 8: California. Washington, D.C.: Smithsonian Institution.
- Lightfoot, Kent. 1997. Cultural Construction of Coastal Landscapes: A Middle-Holocene Perspective from San Francisco Bay. In: Archaeology of the California Coast during the Middle Holocene, J.A Erlandson and M.A. Glassow (eds.), 129-142. Institute of Archaeology, University of California, Los Angeles, CA.
- Lillard, J.B., R.F. Heizer, & F. Fenenga. 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College Bulletin, 2.
- Literacy for Environmental Justice. 2009. For Educators. Available: <<http://www.lejyouth.org/educator/edu.html>>. Accessed December 11, 2009.
- McCarthy, F. F. (1942). Hunters Point. San Francisco: Flores Paramount Press.
- Meighan, C.W. 1955. Archaeology of the North Coast Ranges, California. University of California Archaeological Survey Reports 30:1–39. Berkeley, CA.
- Meneguzzi, Ann. Chief Ranger. Candlestick Point State Recreation Area, San Francisco, CA. November 10, 2009— telephone conversation with Sarah Heard of AECOM regarding education and interpretive programs, utilities and infrastructure, hazardous materials, and water quality; November 10, 2009— e-mail to Sarah Heard of AECOM clarifying water quality testing; December 9 2009— written overview of park operations, circulation, utilities, and facilities. January 26, 2010— telephone conversation with Sarah Heard of AECOM regarding recreational activities and facilities.
- Meneguzzi, Ann. Chief Ranger. Candlestick Point State Recreation Area, San Francisco, CA. February 22, 2010 – telephone conversation with Charles Battaglia of AECOM regarding biological resources within CPSRA.
- Metropolitan Transportation Commission. 2009a (April). Transportation 2035 Plan for the San Francisco Bay Area (Final). Oakland, CA.
- . 2009b (March). Regional Bicycle Plan for the San Francisco Bay Area, 2009. Prepared by Eisen|Letunic and Fehr & Peers.

- Milliken, R.T. 1995. *A Time of Little Choice: the Disintegration of Tribal Culture in the San Francisco Bay Area, 1769-1810*. Ramona, California: Ballena Press.
- Moises, Ernie. Maintenance supervisor. Candlestick Point State Recreation Area, San Francisco, CA. February 10, 2010— written overview of park infrastructure and facilities. February 17, 2010— site visit to evaluate park infrastructure and facilities and transmission of map displaying areas of shoreline erosion.
- Moratto, M. 1984. *California Archaeology*. New York: Academic Press.
- MTC. See Metropolitan Transportation Commission.
- Musillami, Steve. Associate Landscape Architect. California Department of Parks and Recreation, General Planning Division. Sacramento, CA. December 8, 2009— email with an attachment illustrating totals and locations of existing parking spaces at the park.
- National Marine Fisheries Service. 1997. (August). Endangered and threatened species: listing of several evolutionary [sic] significant units (ESUs) of west coast steelhead. *Federal Register* 62: 43937-43954, August 18, 1997.
- . 1999. (September 16). Endangered and threatened species; threatened status for two Chinook salmon evolutionarily significant units (ESUs) in California. *Federal Register* 64: 50394-50415.
- National Park Service. 2009a. San Francisco Maritime National Historic Park: Park Statistics. Available: <<http://www.nps.gov/safr/parkmgmt/statistics.htm>>. Last updated April 2, 2009. Accessed November 3, 2009.
- . 2009b. San Francisco Maritime National Historic Park: Things to Do. Available: <<http://www.nps.gov/safr/planyourvisit/things2do.htm>>. Last updated July 28, 2009. Accessed November 3, 2009.
- . 2010. U.S. Department of the Interior, National Park Service Website: nps.gov. San Francisco Maritime page, Alma. <<http://www.nps.gov/safr/historyculture/alma.htm>>.
- Natural Resources Conservation Service. 2010 (January 29). Custom Soil Resource Report for San Mateo County, Eastern Part, and San Francisco County, California: Candlestick Pt.
- Naval Facilities Engineering Command, Southwest Division. 2000. Final Environmental Impact Statement for the Disposal and Reuse of Hunters Point Shipyard, Vol. 1: Main Text and Appendices. Base Realignment and Closure Operations Office, San Diego, CA.
- Moratto, M. 1984. *California Archaeology*. New York: Academic Press.

- Navy. See Department of the Navy, Base Realignment and Closure.
- Nelson, N.C. 1909. Shellmounds of the San Francisco Bay Region. University of California Publications in American Archaeology and Ethnology, 7 (4), 310-357.
- NPS. See National Park Service.
- NRCS. See Natural Resources Conservation Service.
- O'Brien, T. (2005). Images of America: San Francisco's Bayview Hunters Point. Arcadia Press, San Francisco, CA.
- Olmsted, R., Olmsted, N., Pastron, A. G., & Pritchett, J. 1981. Rincon de las Salinas y Potrero Viejo: The Vanished Corner. Historical Archaeological Program at the Southeast Treatment Plant, 1978-1979. San Francisco: San Francisco Clean Water Program.
- Olmsted, R., Olmsted, N., Pastron, A. G., & Pritchett, J. 1980. Research Design to Locate Nelson Shellmounds Subject to Impact by San Francisco Sewer Route 2 A-1. In R. Olmsted, N. Olmsted, A. Pastron, & J. Pritchett, San Francisco Bayside: Historical Cultural Resource Study. San Francisco Clean Water Program, San Francisco, CA.
- OPC. See California Ocean Protection Council.
- Open Space 2100. See Open Space San Francisco: 2100.
- Open Space San Francisco: 2100. 2009. A Framework for Open Space in San Francisco. Available at: <<http://www.openspacesf.org/about>>. Accessed November 2, 2009.
- Parkman, E.B. 1980. Toward a Pragmatic Interpretation of the Seasonal Exploitative Pattern of Native California: Archaeological Inferences from the San Francisco Bay Area. Manuscript on file, California Department of Parks and Recreation, Sacramento, CA.
- Parkman, E.B. 1994. The Bedrock Milling Station. In: The Ohlone Past and Present- Native Americans of the San Francisco Bay Region. Ballena Press Anthropological Papers, No. 42. Ramona, CA.
- Pastron, A.G. 2008. Historical Context for the Archeology of the Bayview Waterfront Project, San Francisco, California. Rohnert Park, CA: Northwest Information Center.
- Pastron, A.G., & R.D. Ambro. 2009. Archaeological Research Design and Treatment Plan for the Executive Park Project, City and County of San Francisco, California. Rohnert Park, CA: Northwest Information Center.

- Pastron, Allen G., Richard D. Ambro, and Emily Wick. 2009. Historical Context for the Archaeology of the Bayview Waterfront Project, San Francisco, California – Archaeological Background Study, Volume I. Prepared by Archeo-Tec, Oakland, CA for PBS&J, San Francisco, CA.
- Pastron, A.G., R.D. Ambro, and E. Wick. 2008. Report of Preliminary Archaeological Testing for the Executive Park Project, City and County of San Francisco, California [Draft]. San Francisco: Turnstone Consulting.
- Patricia Johanson. 2011. Endangered Garden, San Francisco, CA. Available: <<http://patriciajohanson.com/endangered-garden/>>. Accessed April 12, 2011.
- Pavlik, Bruce, P. Muisk, S. Johnson, and M. Popper. 1991. Oaks of California. Cachuma Press and the California Oak Foundation. Los Olivos, CA.
- RMC Water & Environment, Jones & Stokes, et al. (RMC & Jones & Stokes). 2006. San Francisco Bay Area Integrated Regional Water Management Plan (IRWMP). November 2006.
- RPD. See San Francisco Recreation and Park Department.
- RWQCB. See California Regional Water Quality Control Board, San Francisco Region.
- Rump, Patrick. Bay Youth for the Environment Manager. Literacy for Environmental Justice, San Francisco, CA. December 7, 2009— telephone conversation with Sarah Heard of AECOM regarding education and volunteer programs at CPSRA.
- San Francisco Department of Public Health. 2006a (September 19). Health Programs in Bayview Hunter's Point and Recommendations for Improving the Health of Bayview Hunter's Point Residents.
- . 2006b. HDMT – Neighborhood Profile Comparison, Bayview. Available: <<http://www.thehdm.org/neighborhoods/compare>>. November 3, 2011.
- San Francisco Department of Public Health. 2009a. HDMT – The Tool. Available: <<http://www.thehdm.org/tool.php>>. February 22, 2010.
- . 2009b. HDMT – Case Studies. Available: <http://www.thehdm.org/case_studies.php>. February 22, 2010.
- . 2009c. HDMT – Demographic D.1 Population density. Available: <<http://www.thehdm.org/indicators/view/183>>. February 22, 2010.
- . 2009d. HDMT – Demographic D.2 Neighborhood population by race and Hispanic origin. Available: <<http://www.thehdm.org/indicators/view/161>>. February 22, 2010.

- . 2009e. HDMT – Demographic D.4 Proportion living below the poverty level. Available: <<http://www.thehdm.org/indicators/view/163>>. February 22, 2010.
- . 2009f. HDMT – Demographic D.6 Unemployment rate. Available: <<http://www.thehdm.org/indicators/view/165>>. February 22, 2010.
- San Francisco Department of Public Works. 2010. Bayview Transportation Improvements Project Process & Schedule. Available: <<http://www.bayviewtrans.org/>>. Accessed February 23, 2010.
- San Francisco Department of Public Works and California Department of Transportation. 2008 (February 19). Bayview Transportation Improvements Project Alternatives (Draft).
- San Francisco Estuary Institute. 2007. The 2006 RMP Annual Monitoring Results. San Francisco Estuary and the Regional Monitoring Program for Water Quality in the San Francisco Estuary. SFEI Contribution No. 542. San Francisco Estuary Institute, Oakland, CA.
- . 2008. The 2007 RMP Annual Monitoring Results. The Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP). SFEI Contribution No. 572. San Francisco Estuary Institute, Oakland, CA.
- San Francisco Estuary Project. 2007 (August 3). 2007 Comprehensive Conservation and Management Plan.
- San Francisco Municipal Transportation Agency. 2009 (June 26). 2009 San Francisco Bicycle Plan. San Francisco, CA.
- San Francisco Office of Economic and Workforce Development. 2009. The Bayview Waterfront: Hunters Point Shipyard and Candlestick Point. Available: <http://oewd.org/Development_Projects-Candlestick_Park_-_Hunters_Point_Shipyard.aspx>. Accessed December 1, 2009.
- San Francisco Planning Department. 1996. San Francisco General Plan. Adopted June 27, 1996. Available: <http://www.sfgov.org/site/planning_index.asp?id=41423>. Accessed November 25, 2009.
- . 2004. Bayview Hunters Point Area Plan. Adopted July 20, 1995; reflects amendments through June 16, 2004. Available: <http://www.sfgov.org/site/planning_index.asp?id=41398>. Accessed October 27, 2009.
- . 2009a (May). Draft Recreation and Open Space Element. San Francisco, CA.
- . 2009b (March 19). Executive Park Sub-Area Plan.

- . 2009c (April). San Francisco General Plan Draft Housing Element, Part I: Data and Needs Analysis. San Francisco, CA.
- San Francisco Planning Department, San Francisco Recreation and Park Department, Mayor's Office of Neighborhood Services, Mayor's Office of Greening, and Neighborhood Parks Council. 2009. An Open Space Vision for San Francisco. Available: <
http://openspacesf.org/files/AN_OPEN_SPACE_VISION_FOR_SAN_FRANCISCO_text.pdf>. Accessed November 2, 2009.
- San Francisco Public Utilities Commission. 2004. Storm Water Management Plan 2003-2004. January 2004.
- . 2008. SFPUC Urban Water Planning Charrette, Bayside Basins Summary Report. May 2008.
- . 2009a. Beach Water Quality. Available:
 <http://sfwater.org/custom/lims/beachmain1.cfm/mc_id/20/MC_ID/20/MSC_ID/198>. Last updated December 7, 2009. Accessed December 7, 2009.
- . 2009b. SFPUC and SPDPH Beach Water Quality Monitoring Program. Available:
 <http://sfwater.org/detail.cfm/MC_ID/20/MSC_ID/198/MTO_ID/515/C_ID/3554>. Accessed December 7, 2009.
- San Francisco Recreation and Park Department. 2006 (May). Recreation and Park Acquisition Policy. San Francisco, CA.
- . 2009a. Natural Areas Program: Frequently Asked Questions. Available:
 <http://sfnap.org/a_us/a_faqs.html>. Accessed November 2, 2009.
- . 2009b. Welcome. Available: <http://www.sfgov.org/site/recpark_index.asp?id=24168>. Accessed November 2, 2009.
- . 2009c. About Natural Areas Program. Available:
 <<http://sfnap.org/index.html>>. Accessed October 28, 2009.
- . 2009d. Natural Areas: Bayview Hill Natural Area. Available: <http://sfnap.org/n_area/parks/na_bay.html>. Accessed October 28, 2009.
- San Francisco Redevelopment Agency. 2009a. Bayview Hunters Point. Available:
 <<http://sfredevelopment.org/index.aspx?page=53>>. Accessed December 1, 2009.
- . 2009b. Visitacion Valley. <Available:
<http://sfredevelopment.org/index.aspx?page=135>>. Accessed December 1, 2009.

San Francisco Redevelopment Agency and San Francisco Planning Department. 2008 (December 11). Bayview Waterfront Project Biological Technical Report. San Francisco, CA. Prepared by PBSJ, San Francisco, CA.

———. 2009 (November 12). Candlestick Point-Hunters Point Phase II Draft Environmental Impact Report. San Francisco, CA. Prepared by PBSJ, San Francisco, CA.

San Mateo County. See San Mateo County Department of Parks.

San Mateo County Department of Parks. 2009. San Bruno Mountain State & County Park. Available: <<http://www.co.sanmateo.ca.us/portal/site/parks>>. Accessed November 3, 2009.

SCC. See State Coastal Conservancy.

Schenck, W.E. 1926. The Emery Ville Shellmound: Final Report. University of California Publications in American Archaeology and Ethnology, 23 (3), 147-282.

SFDPH. See San Francisco Department of Public Health.

SFDPW. See San Francisco Department of Public Works.

SFDPW and Caltrans. See San Francisco Department of Public Works and California Department of Transportation.

SFEP. See San Francisco Estuary Project.

SFMTA. See San Francisco Municipal Transportation Agency.

SFOEWD. See San Francisco Office of Economic and Workforce Development.

SFPD. See San Francisco Planning Department.

SFPUC. See San Francisco Public Utilities Commission.

SFRA. See San Francisco Redevelopment Agency.

SFRA and SFPD. See San Francisco Redevelopment Agency and San Francisco Planning Department.

SLC. See State Lands Commission.

Social Vocational Services, Inc. About Us. Available: <<http://www.socialvocationalservices.org/aboutus.htm>>. Accessed January 13, 2010.

- State Coastal Conservancy. 2006. California Clapper Rail Surveys for the San Francisco Estuary Invasive Spartina Project. Berkeley, California. (Prepared by Hildie Spautz and Jennifer McBroom, Olofson Environmental, Inc., Oakland, CA)
- State Lands Commission. n.d. Public Trust Policy. Available: http://www.slc.ca.gov/Policy_Statements/Public_Trust/Public_Trust_Policy.pdf. Accessed February 23, 2010.
- State Parks. See California Department of Parks and Recreation.
- SVS. See Social Vocational Services, Inc.
- Switzer, L.S. 1974. An Ethnohistory of the Costanoans of San Francisco Bay. In: The Costanoans Indians, R. Heizer (ed.). University of California Berkeley Press, Berkeley, CA.
- The San Francisco 49ers. 2009. Season Schedule. Available: <http://www.49ers.com/gameday/season-schedule.html>. Accessed January 4, 2010.
- USGS. See United State Geological Survey.
- United States Environmental Project Agency. 2007. 2006 CWA Section 303(d) List of Water Quality Limited Segments. June 28, 2007.
- United States Fish and Wildlife Service. 2010. Results of electronic search of endangered species lists. Sacramento Fish and Wildlife Office. Sacramento, CA. Last updated: December 1, 2009. Available: http://www.fws.gov/sacramento/es/spp_list.htm. Accessed February 8, 2010.
- United State Geological Survey. 2009. 2008 Bay Area Earthquake Probabilities. Available: <http://earthquake.usgs.gov/regional/nca/ucrf/>. Accessed January 14, 2010.
- USFWS. See U.S. Fish and Wildlife Service.
- USS Indianapolis. Still at Sea. Available: www.ussindianapolis.org Accessed November 14, 2010.
- Willey, G.R., and P. Phillips. 1958. Method and Theory in American Archaeology. Chicago: University of Chicago Press.

3 – Issues and Analysis

Archambault, Laurie. Senior Environmental Scientist. California Department of Parks and Recreation, Northern Service Center. Sacramento, CA. January 21, 2010—phone conversation with Sarah Heard of AECOM regarding background and

status of the Yosemite Slough Restoration Project; September 28, 2010— email to Sarah Heard of AECOM regarding status of the Yosemite Slough Restoration Project.

BCDC. See San Francisco Bay Conservation and Development Commission.

California State Parks Foundation. 2010 (August 30). California State Parks Foundation and Lennar Urban reach agreement on process for design of Yosemite Slough Bridge. Accessed November 4, 2010. Available: <<http://www.calparks.org/press/2010/california-state-parks-foundation-and-lennar-urban-reach-agreement-on-process-for-design-of-yosemite-slough-bridge.html>>.

CSPF. See California State Parks Foundation.

Lennar Corporation. 2009. Draft Parks, Open Space, and Habitat Concept Plan: Candlestick Point and Hunters Point Shipyard Phase II. San Francisco, CA. Prepared by RHAA.

Moffatt & Nichol. 2009 (October). Candlestick Point/Hunters Point Redevelopment Project: Shoreline Structures Assessment. Walnut Creek, CA.

Rahmstorf, S., A. Cazenave, J.A. Church, J.E. Hansen, R.F. Keeling, D.E. Parker, and R.C.J. Somerville, 2007. Recent Climate Observations Compared to Projections. *Science* 316, p. 709.

San Francisco Bay Conservation and Development Commission. San Francisco Bay Scenarios for Sea Level Rise Index Map. Accessed April 25, 2010. Available: <http://www.bcdc.ca.gov/planning/climate_change/index_map.shtml>.

San Francisco Redevelopment Agency and San Francisco Planning Department. 2009 (November 12). Candlestick Point-Hunters Point Phase II Draft Environmental Impact Report. San Francisco, CA. Prepared by PBSJ, San Francisco, CA.

———. June 2, 2010. Disposition and Development Agreement (Candlestick Point and Phase 2 of the Hunters Point Shipyard). Available: <http://www.sfdevelopment.org/Modules/ShowDocument.aspx?documentid=2865>. Accessed on April 24, 2012.

5 – Environmental Analysis

Aesthetic Resources

California Department of Transportation (Caltrans). 2011. California Scenic Highway Mapping System. Last updated December 7, 2007. Available:

http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. Accessed June 15, 2011

Air Quality

Bay Area Air Quality Management District. 2011 (May). BAAQMD CEQA Guidelines.

Available:

<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_May%202011_5_3_11.ashx>. San Francisco, CA. Last updated [May 2011]. Accessed [June 1, 2011].

California Air Resources Board. 2011a. Air Quality Data Statistics. Available:

<<http://www.arb.ca.gov/adam/welcome.html>>. Accessed May 28, 2011.

California Air Resources Board. 2011b. Ambient Air Quality Standards and Area Designation Maps - State and National. Available:

<<http://www.arb.ca.gov/desig/adm/adm.htm#state>>. Accessed May 28, 2011

California Air Resources Board. 2011c. *Air Resources Board Emissions Inventory*.

Available: <<http://www.arb.ca.gov/ei/ei.htm>>. Accessed May 28, 2011.

California Geological Survey 2000. A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos. Sacramento, CA Open-File Report 2000-19.

Kirk, Alison. Senior Planner. Bay Area Air Quality Management District, San Francisco, CA. May 24, 2011—telephone conversation with Mike Wolf of AECOM regarding CPSRA construction and operations emissions screening.

Western Regional Climate Center (WRCC). 2011. Climatological Summary (7/1/1996 to 12/31/2008) for SFO (KSFO). Available: <<http://www.wrcc.dri.edu/summary/sfo.ca.html>>. Accessed May 29, 2011.

Climate Change

Bay Area Air Quality Management District. 2011 (May). *California Environmental Quality Act Air Quality Guidelines*. Available:

<<http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>>. Accessed 06/01/2011.

California Air Resources Board (CARB). 2008a (October). Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act. Sacramento, CA. Available at:

<<http://www.arb.ca.gov/cc/localgov/ceqa/meetings/102708/prelimdraftproposal102408.pdf>> Accessed June 1, 2011.

2008b (December). *Climate Change Proposed Scoping Plan*. Sacramento, CA. Available:

<<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>>. Accessed June 1, 2011.

IPCC. See United Nations Intergovernmental Panel on Climate Change.

Risien, J. (ed.) 2009. West Coast Regional Marine Research and Information Needs. Corvallis, Oregon: Oregon Sea Grant.

San Francisco Bay Conservation and Development Commission (BCDC). 2009. Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline, Draft Staff Report. April 7, 2009.

United Nations Intergovernmental Panel on Climate Change. 2007 (February). *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Geneva, Switzerland.

U.S. Environmental Protection Agency. 2011. Coastal Zones and Sea Level Rise. Available at: <http://epa.gov/climatechange/effects/coastal/index.html> > Last updated April 14, 2011. Accessed November 18, 2011.

Cultural Resources

California Department of Parks and Recreation. 1978 (January). Plot Plan – Artificial Fill and Bay Mud Limits.

San Francisco Redevelopment Agency. 2009 (November 12). *Candlestick Point-Hunters Point Phase II Draft Environmental Impact Report*. San Francisco, CA. Prepared by PBSJ, San Francisco, CA.

Geology and Soils

San Francisco Redevelopment Agency and San Francisco Planning Department. 2009 (November). Draft Environmental Impact Report Candlestick Point-Hunters Point Shipyard Phase II, Volume II: Draft EIR (Chapter III, Section III.I, Geology and Soils). San Francisco, CA.

Hazards and Hazardous Materials

San Francisco Redevelopment Agency and San Francisco Planning Department. 2009 (November). Draft Environmental Impact Report Candlestick Point-Hunters Point

Shipyards Phase II, Volume II: Draft EIR (Chapter III, Section III.K, Hazards and Hazardous Materials). San Francisco, CA.

San Francisco Redevelopment Agency and San Francisco Planning Department. 2009 (November). Draft Environmental Impact Report Candlestick Point-Hunters Point Shipyards Phase II, Volume II: Draft EIR (Chapter III, Section III.O, Public Services). San Francisco, CA.

Hydrology and Water Quality

Association of Bay Area Governments (ABAG). 2003. Dam Failure Inundation Hazard Map for San Francisco.

Noise

California Department of Transportation (Caltrans). 2004. *Transportation and Construction-Induced Vibration Guidance Manual*. Sacramento, CA. Table 19. Page 27.

Federal Transit Administration. 2006 (May). Transit Noise and Vibration Impact Assessment. Washington, D.C. Pages 12-11 to 12-13

Governor's Office of Planning and Research. 2003 (October). State of California General Plan Guidelines. Sacramento, CA. Page 250.

Transportation

California State Park System 2010 (August) Statistical Report 2008/09 Fiscal Year.

Womeldorff, Eric. Senior Transportation Engineer. Fehr & Peers. July 22, 2011—email to Marie Galvin of AECOM regarding trip projections for CPSRA that were developed as part of the traffic technical appendix for the Candlestick Point-Hunters Point Shipyards Phase II Project.

Utilities and Service Systems

Meneguzzi, Ann. Chief Ranger. Candlestick Point State Recreation Area, San Francisco, CA. November 10, 2009—telephone conversation with Sarah Heard of AECOM regarding education and interpretive programs, utilities and infrastructure, hazardous materials, and water quality; November 10, 2009—e-mail to Sarah Heard of AECOM clarifying water quality testing; December 9 2009—written overview of park operations, circulation, utilities, and facilities. January 26, 2010—telephone conversation with Sarah Heard of AECOM regarding recreational activities and facilities

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